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### *Fences, walls and gates, with particular reference to the Atlantic fringe of Europe*

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Dissertation Submitted for the Degree of Master of Arts  
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FENCES, WALLS AND GATES, WITH PARTICULAR  
REFERENCE TO THE ATLANTIC FRINGE OF EUROPE.

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January, 1966.

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## INTRODUCTION - AIMS AND METHODS.

Any landscape derives its character partly from the natural features of the area - the nature of the underlying rocks and their disposition, the landforms, the climate and the vegetation - and partly from the effects of the activity of man. One of the ways in which the individuality of an area may be expressed that is perhaps less obvious than some is the manner in which man, using the natural resources available, breaks up the landscape, dividing one parcel of land from another. It is difficult, for instance, to imagine southern England without its hedgerows, or the Yorkshire Pennines without their reticulate pattern of drystone walls.

While Agricultural Geography has achieved academic respectability in its own right, and ancient and present-day field-patterns have interested both archaeologists and geographers for some decades, the walls, fences and gates that contribute much to the distinctive character and charm of any stretch of countryside have seldom been subjected to rigorous scientific study, nor have the geographical distributions of the different types been analysed in any detail. Indeed it is only very recently that any aspect of folk-lore or rural life has been considered worthy of serious academic investigation.

The purpose of the present study was to compile an inventory of the wall, fence and gate-types in Britain produced by the traditional craft methods of the countryside - ornamental gates, mass produced types and hurdles are in general excluded - and as far as possible to correlate these with forms found on adjacent parts of the continent and elsewhere. Such comparative material could then be used in an attempt to establish how far these aspects of rural life are directly determined by environmental

factors, such as geology and natural vegetation, and how far they are the result of cultural influences, such as varying systems of agriculture and the enclosure movement to name but two. Some attempt has been made to plot distribution maps for selected forms.

### The Atlantic Fringe of Europe.

The term "Atlantic Fringe" has been found useful by a number of archaeologists, geographers and folk-culturalists. It is a rather vague term, and there have been almost as many definitions of it, and of analogous terms, as there have been of the problems to which its definition gives rise.

Fleure(1919) used the term "regions of difficulty" to describe the Caledonian, Hercynian and Alpine uplands of Western Europe, applying the term "regions of effort" to the intervening lowland areas such as the lowland zone of England, the Paris Basin, the Low Countries and southern Scandinavia, with more fertile soils and lighter rainfall. Within the British Isles Sir Cyril Fox (1947), distinguished, on archaeological evidence, a "zone of absorption" in highland Britain and a "zone of replacement" in the lowlands, emphasising the two types of cultural differentiation in the British Isles.

In 1956, E. Estyn Evans defined Western Europe as:-

"The insular and peninsular ends of the continent, north of the Mediterranean lands of summer drought and south of the cold coniferous forest, which lie open to the climatic influences of the Atlantic Ocean and the impact of the sea-borne cultures."

Two years later, Evans (1958) used the term "The Atlantic Ends of Europe" to correspond with his earlier definition of

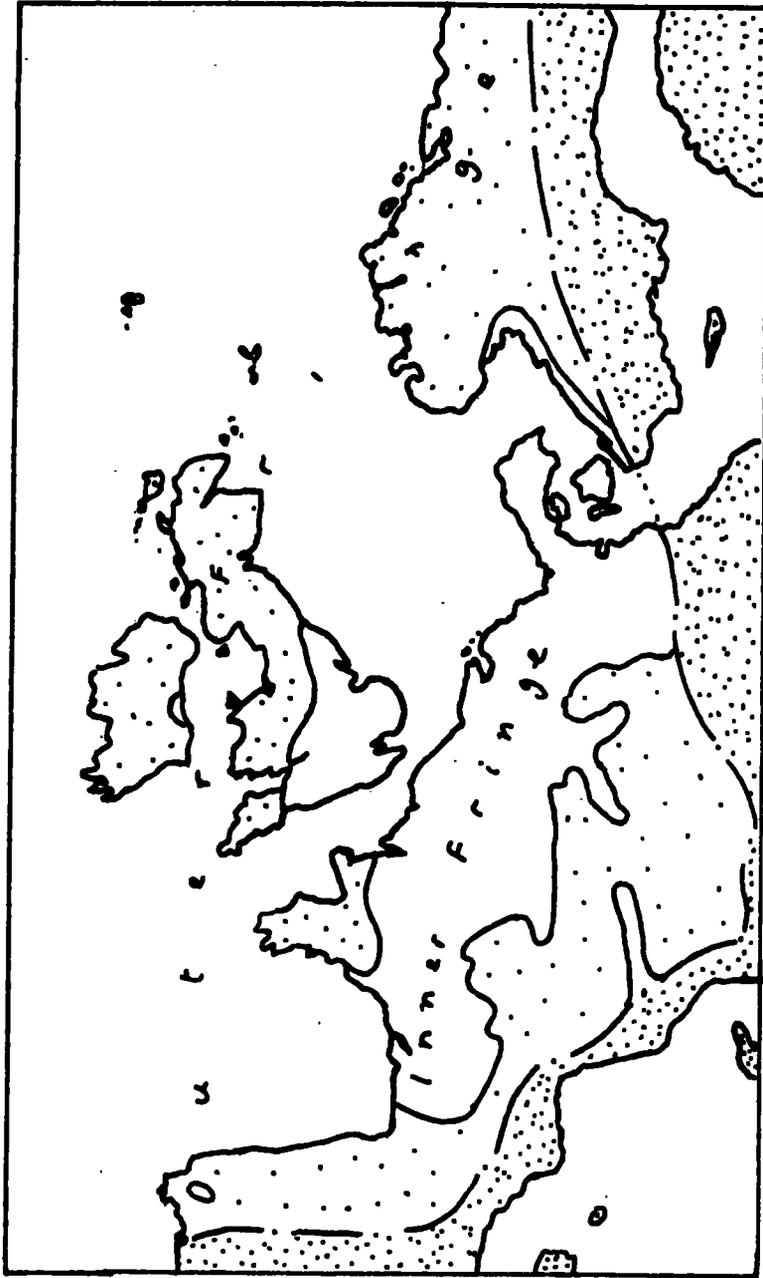


Fig. 1. The Atlantic Fringes of Europe.

"Western Europe"; he mentions it as including the coastlands from "The Lofoten Islands to the mouth of Douro". He points out that the area thus defined belongs to a single ecological zone, that of temperate deciduous forest, broken only by the mountain islands of the High Alps and the Pyrenees, and the fjelds of Scandinavia with their skirt of boreal coniferous woodland.

Perhaps while accepting Evans' definition, it might be worth making a distinction between an "Outer Fringe", including many of Fleure's "regions of difficulty", comprising north-west Spain, Brittany, the highland zone of Britain (Fox's zone of absorption) and most of Norway and western Sweden, and an "Inner Fringe" including the "regions of effort" and "zone of replacement" a band to the south and east extending from the Welsh borderland to the Baltic, and from the Basin of Aquitaine to Jutland and Scånia. (See Fig. 1).

Most of the observations recorded in the present work have been made in the British Isles, but continental material has been included for its comparative value, and reference will be made to all parts of the Atlantic Fringes. More infrequently, mention will be made of places in Europe as far east as the Baltic, and occasionally a comparison may be made with material in other parts of the world.

#### Previous Work.

As has already been mentioned, studies of folk-life and rural culture are not as well developed in Britain as Scandinavia, Holland and certain other countries where research of this sort is undertaken by highly trained scholars. Much of what has been done in this field in the British Isles has been done in Ireland and Wales - countries

which, like the continental nations mentioned above, are small and yet have a strong sense of national pride. Perhaps it is this desire to establish a national identity that has, in these countries, stimulated an interest in the origins and rural culture of the people.

The foundations for the establishment of the science of folk-life studies were laid by a small group of Victorian enthusiasts, who, at a time when much of the rural tradition was disappearing, were urged to "gather up fragments that remain, that nothing be lost". They were often regarded as a eccentric if harmless body of men and women engaging in an obscure dilettantism.

However, throughout the first half of the twentieth century it came to be realised that in folk-life studies, the geographer, archaeologist and ethnologist had a useful tool to aid them in the establishment of cultural relationships in both time and space. When considered along with other evidence, it could be used in the delimitation of cultural regions and in the establishment of ancient cultural relations. A pioneer in this work was H.J. Fleure.

The Swedish, Danish and Finnish folk-life scholars, who had had a head's start in this type of work, had achieved great sophistication in the interpretation of the data which the new science provided. The great Swedish worker Sigurd Erixon made a plea for a European ethnology based on folk-life studies in a series of important papers in the 1930s and 1940s. Perhaps the most significant was his article in 1938 on "West European Connections and Culture Relations" in which, using a variety of evidence including archaeological material, house styles, peasant

dress and furnishings and cart-types, he placed great stress on Western or "Atlantic" Europe both as a channel for the movement of cultural traits and as a cultural region in its own right.

In the years that followed, the work of collection continued, particularly in the Celtic fringes; E. Estyn Evans published much material on the Irish tradition (1942, 1957), and workers such as G. Geraint Jenkins were active in Wales. The founding of the Museum of English Rural Life at the University of Reading in 1951 provided impetus to the movement in England.

In the last decade there have been two closely associated but yet distinct developments in the subject, both of which have exciting potentialities for the future. One is the change in emphasis from the detailed study of the actual objects of material culture (and the components of non-material culture such as folk-tales, rituals and traditional songs) to an evaluation of the role that these things played in the life of rural societies in an attempt to view the subject from a sociological standpoint. G.E. Evans (1956) in "Ask the Fellows who Cut the Hay" made a brilliant analysis of the social structure and personal relationships of a Suffolk village a century ago that might well provide a pattern for detailed studies of this sort elsewhere. Recently workers such as Gailey (1964) and Buchanan (1965) have written on the nature of tradition and social change in Northern Ireland. Coupled with this concentration on the relationships between the rural folk themselves, there has recently been a good deal of enthusiasm amongst geographers and folk-life specialists for the application of the ecosystem concept to man-made and semi-natural environments and the detailed consideration of the ecology of man's relationship to the soil and animal and plant life surrounding him. A good example of this type of work is E. Estyn

Evans (1956) masterly account of "The Ecology of Peasant Life in Western Europe".

The present-day student of rural life and traditions must learn from all of his predecessors; it remains vitally important to record and to classify. To confirm cultural relations and routes of cultural diffusion is still very valuable, but an attempt must be made to interpret material culture in terms of the economy of the rural society in which it was in daily use, and also to consider its relationships with other parts of the physical environment.

Published material on gates, fences and walls is as scattered and uneven in its coverage as is any part of the subject's literature. Some work has been done by the Scandinavian workers, but much of this is in Swedish or Finnish and so is difficult of access to Britain Researchers. E. Estyn Evans makes several mentioned of gate- and fence-types in his writings (1942, 1951, 1956a, 1957) and some of his former students in the Geography Department of Queen's University Belfast have followed him, e.g. Dickinson (1952). Some work has also been done by members of the Irish Folklore Commission in Dublin - O'Danachair (1965).

English material is scanty. R. Handsford Worth has some observations on gate-types in the west of England, in his book on Dartmoor, published in 1953, and A. Raistrick of the University of Newcastle wrote a book entitled "Pennine Walls" in 1946. Col. F. Rainsford-Hannay seems to have drawn on Raistrick's work in his book "Drystone Walling" published in 1957. This last is a short work but mentions some of the older references to the subject and has some excellent photographs of walls in many parts of Britain and abroad.

In America, Mather and Hart (1954) produced a paper entitled "Fences and Farms" which reviewed the geographical importance of fences and mentioned some practical fencing problems. The authors studied the development of the American fence in some detail and gave a catalogue of fence types in the eastern U.S.A. Leachman (1953) has undertaken similar work in Canada.

Some useful lore can be collected from agricultural journals and books such as J.L. Beddall's "Hedges for Farm and Garden" that are primarily concerned with practical matters. More interesting material may be derived from notes and letters in journals such as The Countryman, The Field, and Country Life.

## Methods of Study.

It may be seen from the foregoing that there was little in the way of systematic published material which could be used in compiling this dissertation although the sources mentioned above were found useful. A considerable amount of field-work had therefore to be undertaken. Intensive field-work was carried out in the year following the approval of the subject of the study in April 1964; in the course of the spring and summer of 1964 visits were made to many parts of northern England, East Anglia, Scotland, Ulster, Wales, and the west country. However, I had been accumulating material for some time before this, and observations relevant to the present survey were made in Scandinavia in the summer of 1959, in the U.S.A. in 1961, in Holland in 1963 and in south west England in the winter of 1963/64.

Methods of recording rural culture in the field have been thoroughly described in the publications of the Museum of English Rural Life at Reading University, e.g. C.A. Jewell (1957 and 1960). My own observations of gate-types, methods of walling and so forth are recorded in a pocket note-book; the information is later transferred to a card index system; 4 x 6 ins. cards are used, and each is given a code number relating it at once to the country or with British examples to the county in which the original observation was made. On each card are noted:- the date and exact locality of the observation, details of the agricultural situation together with notes on the methods of fastening and hanging of gates where these are of particular interest. A sketch is drawn on each card, and the whole card-index is cross-referenced to my original note-books. Any features of special interest are photographed using a 35 mm camera.

In a few instances, particularly in Ireland where the number of gate-designs in a small area is quite large, a technique involving a type of linear transect was attempted. Along some three or four miles of country road every gate is noted, so that some statistical assessment of the numbers of each type may be made.

The programme of field-work was supplemented by an examination of photographs from many localities. Both the Museum of English Rural Life at Reading and the Welsh National Folk Museum at St. Fagans have extensive collections of photographs illustrating many aspects of rural life and culture, and I had the opportunity of examining these. An extensive search was also made through back numbers of the journals, The Countryman, The Field, and Country Life for photographs of gates and wall-types. At one stage a direct appeal for information was made by means of a letter in the columns of The Field, but this was not very successful as only two replies were received. Requests for help from personal acquaintances were, on the other hand received with interest and sympathy and much useful material was obtained by means of a very simple questionnaire enquiring as to local types of gates, walls and hedges, sent in letter form to a number of people known to be interested in the countryside, living in various parts of Britain.

The distribution-maps in this dissertation are therefore based on field-work, a study of the published and unpublished material of others and the personal communications of many non-specialists. It is realised that because of this, and because of the uneven nature of my own field-work, the usefulness of these maps will be restricted. Some trends do emerge, however, and as no

previous attempt seems to have been made to compile maps showing the areal extent of these features, the attempt seemed worth making. It must be emphasised that the maps show the distribution of the present writer's records of any particular type. Further work might well reveal major deficiencies. It should also be noted that a symbol on one of these maps may indicate a number of examples of the type in question within a small distance of one another. An attempt is made in a few of the maps to give some indication of negative evidence using the techniques of Jope (1963).

One further source was used, particularly in the study of the historical development of field-gates - old prints and pictures. Nineteenth century sporting prints and illustrations in ancient books on agriculture may give an idea of gate-types not now in use, although it must be remembered that many of the engravers responsible for these prints were more interested in the artistic impression created than in rendering the scene with the strictest regard for accuracy.

In many respects this survey is incomplete; some of the distribution maps in particular must contain many omissions, and I am confident that further field-work would reveal many more local variants and might also show that some types, for example some of the more primitive forms, have rather more extensive distributions than I have indicated. Also, a more thorough study of old documents, maps, drawings and paintings would do much to elucidate the course of development of gates and fences in the context of the enclosure movement.

## THE HISTORICAL DEVELOPMENT OF FIELD-BOUNDARIES IN THE BRITISH ISLES.

The intricate tracery of hedges, fences and walls over the face of Britain expresses as well as does any set of features of the countryside the variety of factors, physical and human, of which the landscape is a function. In the drystone walls of upland Britain are reflected the variations of geological structure, and in the pattern of hedges and ditches of south-east England can be read the story of the Enclosure Movement. These almost universal features of the cultural landscape symbolise vividly the harmony that exists between man and the land on which he depends, directly or indirectly, for his livelihood.

Although the investigation of field systems themselves is a separate study from the main theme of this work, a short account of the development of the pattern of field-boundaries in Britain is given at this stage in an attempt to show the multiplicity and complexity of historical influences in determining the phenomena with which this study is concerned.

### Early History.

The glaciers of the last glaciation receded as a general amelioration of the climate took place, accompanied by a slow transformation of the vegetation of the open tundra country of lichen, grass and heath-plants to woodlands of birch and pine and later to deciduous forests of oak, hazel and alder. Palaeolithic and Mesolithic men were nomadic hunters and collectors who lived in caves and crude shelters. Their impact on the land may not have been very great, although there is some evidence for

Mesolithic clearance, for example on Dartmoor.

The first farmers arrived in Britain from the continent of Europe about 3000 B.C., introducing the basis of our civilisation - the systematic cultivation and exploitation of the land - which has developed more or less continuously ever since. The Neolithic men had tools of flint as did their predecessors in the Palaeolithic and Mesolithic, but theirs were much more sophisticated. With stone axes and fire they were able to clear some of the forest lands and to practise a form of agriculture. Neolithic man's farming implements were crude - reindeer antlers as picks and digging-sticks - so they were able to cultivate only light, well-drained soils such as those of the Chalk downlands, the Mendip Hills and the Oolite ridges. The clearance of the thicker forests and particularly the breaking of the heavy clay soils of the valleys was beyond the capabilities of Neolithic man. The cultivated land must have consisted of small patches of primitive types of wheat, and barley outside a settlement of thatched timber huts. A few animals grazed outside on the open upland, perhaps being brought inside for safety. Beddall (1950) suggests that there may have been hedges to keep stock out of the corn but they would have been poor, "... made no doubt by the bending down and intertwining of long shoots of shrubs left in a rough line." Probably they also built turf walls from the grassland sward, and constructed crude fences of rows of wooden stakes. Coles (1965) describes a row of stake-holes "probably marking a low fence" from a Neolithic site at Hurst Fen, Mildenhall, Suffolk, and Proudfoot (1957) has drawn attention to some boundaries of similar age beneath peat in Ireland. Plots of this period are however rare, because the crude scratching of the soil probably did not produce marked "lynchets" (ie. "Banks piled up at the bottom of a cultivated field on a slope, owing to the soil creeping down the hill when loosened." Wood (1963) ) and in

any case these would probably have been removed by later ploughing, but a few small irregular ridges associated with hut-circles of this age have been found in Devon and Cornwall, e.g. at Carn Brea, White Ridge and Rough Tor.

The "Beaker People" - so called because of their characteristic pottery vessels - invaded Britain about 1800 B.C.. They were the first craftsmen in metal to reach our shores and their arrival marked the beginning of the Bronze Age. With metal in their hands they could more easily clear the forest and scrub. Man still lived and farmed in the uplands, with his small fields around each settlement, tilled either with a type of foot-plough or a light ox-drawn plough or "ard" which scratched the surface of the soil but did not turn the sod. These techniques of cultivation did not vary appreciably throughout the Bronze and the early part of the Iron Age as successive waves of invaders landed in Britain and spread across the country. Metal tools became more and more plentiful and more land was cleared but it was not before about 75 B.C. with the arrival of the Belgae that the lower and heavier soils of the south-east England were cleared and cultivated. This group - from the north-east of France and Belgium advanced in a series of waves into Kent and thence into Wessex. They spread westwards as far as Devon and northwards to Berkshire and Essex. The Belgae brought with them the heavy Gaulish plough fitted with a coulter, and designed to turn the sod. They became increasingly active in clearing the forests and cultivating the heavier soils; they built isolated farm houses and settled in the valleys, gradually abandoning the hill-top settlements and building towns on the lower sites that have been inhabited ever since. "Hedges and hurdles", says Beddall "would by now be used to enclose their clearing and fields, as the number of cattle was increasing."

Recent excavations at Overton Down, Wiltshire have revealed the first Iron Age field fence to be discovered in Britain. The traces consisted of post holes beneath a later lynchet. The main holes were at two or three-foot intervals, and numerous smaller ones suggest that the posts supported hurdles rather than any sort of railings. (The Times 31.8.65).

By the time of the second Roman invasion the Belgæ had taken possession of most of southern England, and traces of their agriculture are widespread in the area. In addition to their little fields enclosed by banks of turf or stone, hedges or rows of boulders, they seem to have cultivated large tracts of unenclosed land with their plough. The conquest by the Romans locally superimposed a different pattern of settlement, and it seems that two systems existed side by side:-

- (i) The villas and isolated farms, often with elaborate Roman-type dwellings, and having large undivided farm-lands which were ploughed with a heavy type of plough.
- (ii) The small rectangular, square or occasionally triangular fields of up to  $1\frac{1}{2}$  acres around the villages of the Belgic peoples.

It must be stressed however, that there is at present a certain amount of controversy about the nature and age of these "Celtic fields", and the relationship between these and the Romano-British or Belgic or Iron Age settlements.\*

Bowen wrote " 'Celtic fields' represent the first imposition of a regular cultivation pattern on the landscape of this country" and many examples of these groups of fields can be seen today; not a few have been discovered by a study of air-photographs. Excellent examples appear near Lewes in Sussex and at Fyfield Down in

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\* See for example Applebaum (1956 and 1963), and Bowen 1962.

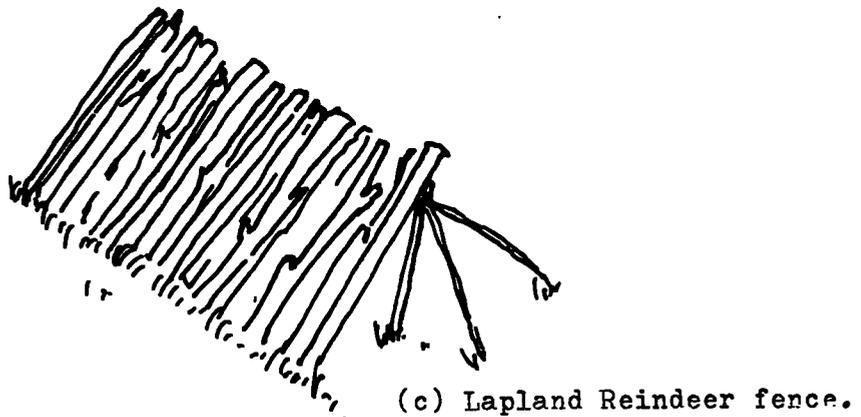
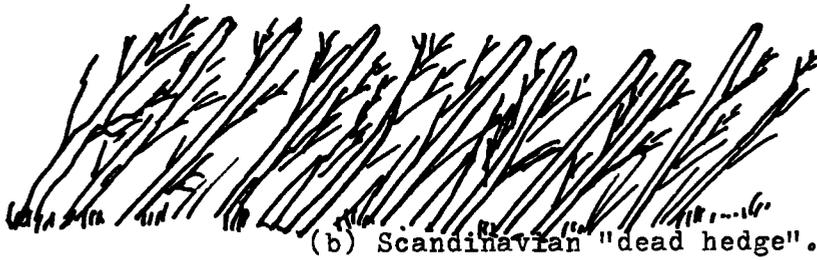
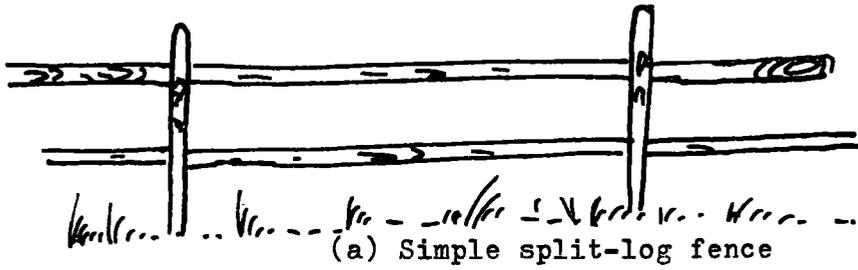


Fig. 10.

Wiltshire. Plate 1 shows another example.

The Romans remained in Britain for about four hundred years, yet their long-term impact on the countryside was small, and when contact with Rome was broken their villa system ceased to exist.

Not a great deal is known about the agricultural methods of the early Anglo-Saxon invaders. There is some evidence that some of these peoples had an "Infield-outfield" system, (see pp 18-19) not very different from that which survived until quite recently in parts of Germany and that this gradually became increasingly sophisticated, developing into the 2 or 3 field "Open field" system traditionally associated with the later Saxons and the Norman Feudal Society of the Middle Ages, with the extensive fields divided into bundles of acre or half-acre strips.

The Open Field system survived in places until the nineteenth century and still remains at Laxton in Northamptonshire (See Plate 2 ). Typically each manor had its church, manor house and frequently a mill, grouped with a number of small thatched cottages. Some of the cottages might have had small paddocks or gardens attached to them, but the amount of land involved here would have been very small. Surrounding the village were two or three large fields each of three hundred acres or more, and beyond these would have been forest, marshland and water-meadows - "leys" or "ings" - waste and common land or "breck". At first these villages were just clearings in the forest, but as time went on, more and more of the land was reclaimed, until little of the waste remained. The

three fields were divided into strips of about one acre or "furlong", and each villager would have a number of strips in each field. The strips were frequently ploughed up and down the slope, both for drainage and ease of cultivation. When the direction of slope changed in a field, the bundles of strips were placed at every conceivable angle to one another.

In the Midlands, on many old pastures, the ridges and furrows of these old lands can be seen, as in plate 3. "They are more usually curved than straight, like an elongated and inverted 'S'... These wavy lands still bear the stamp of the oxen yoked together, and they required a large headland to turn around; so the inverted 'S' was used to save land on the headlands." (Beddall).

The three fields corresponded to the three year rotation of crops - a winter corn crop such as wheat or rye, a spring corn crop such as barley, oats, peas or beans and a third field bare, or fallow. The strips were separated by open furrows or baulks. When a field was being cropped it must have been protected from stock in some way; Beddall suggests that this was done with hurdles, though hedges may have been planted around the outer boundaries.

In the "Celtic Fringe" the "infield-outfield", "run-rig" or "run-dale" system was practiced. The settlement was (and remains) in small units, the hamlet, ferm-toun (Scotland) or clachan (Ireland) and the land around the settlement, the "infield" was worked fairly intensively on a co-operative basis, and cropped each year, receiving all the animal manure available; this land might be fairly completely enclosed. The "outfield" was divided

into some ten or a dozen blocks, breaks, or brecks. Each of these was ploughed and cropped for a number of years and then abandoned. There was no organised system of manuring. Nevertheless, in spite of many similarities in the pattern of farming in the Celtic west considerable differences existed in the proportions of land that was enclosed.

### The Enclosures in England and Wales.

From the twelfth century onwards, as the population grew, difficulties and disputes arising from the straying and trespassing of stock from the waste of one village on to that of another became increasingly frequent. A typical dispute, mentioned by Raistrick, who described the sequence of enclosures in the Yorkshire Dales eruditely in "A History of the Pennine Walls", 1946, is as follows: a dispute arose in 1279 between the tenants of Fountains Abbey on the Kilnsey moors, and those of Saweley Abbey on the Arncliffe and Litton moors, each accusing the other of allowing their stock to wander and feed on the others' ground. The grangers of the two abbeys were ordered to mark the boundary with great stone crosses. Following many such disputes, the boundaries of the wastes between villages and townships were gradually marked out, frequently with a ditch and bank or a massive drystone wall. There is occasional evidence in the monastic cartularies of early walls and enclosures. It is clear from these that the monks were already in the thirteenth century favouring the enclosure of small fields by stone walls and other barriers which would prevent trespass by stock, but that this was contrary to the common practice and customs of the time.

The manorial system broke down for other reasons too. The lord of the manor would retain certain meadows and fields for his own use. The tenants worked in this, the lords demesne for so many days each year in payment of rent. Finding this irksome, tenants frequently took to enclosing portions of the waste land and farming it for their own benefit, escaping the necessity for the payment of the work debt to the lord of the manor. Again, the occurrence of a plague might deprive the lord of the greater part of his labour force and necessitate the reorganisation of the land. Very often in these circumstances the land would be put down to grass and sheep introduced so that a single shepherd replaced a number of ploughman and labourers. This was particularly widespread after the Black Death of 1349.

Throughout the fifteenth and sixteenth centuries the wool trade flourished; better breeds of sheep were introduced and attention was given to the improvement of the grazing land. It thus became more and more usual for outlying waste-land to be fenced in to make the pastures easier to control. Under Queen Elizabeth I, it was made legal for communities to enclose part of the waste and common fields. The individual farmer was thus enabled to get the use of the manure of his own stock, and to put into practice some of the new ideas in agriculture, for example the introduction of many new crops - potatoes from the New World, and turnips, and several types of grasses from the continent - in the seventeenth century.

The Elizabethan enclosures were very important in south-east England, but in the north their effect was restricted to the encouragement of more numerous crofts near the houses. Raistrick (1946) says of the Yorkshire Dales villages:-

"The crofts were abundant, and the leases of houses and farms show that an average one had with it four or five closes or crofts, sometimes making allowance of wood and underwood for the repair of fences, but often allowing the right of getting stone from the waste to make and maintain the walls round the enclosures. . . . These closes make an irregular pattern near the villages - each tenant walling in a portion usually from half to one acre, occasionally a little more, to include large boulders and blocks of stone, or going at a curve to meet some other wall or fence."

Thus by the sixteenth and seventeenth centuries the open field system was collapsing. Independent farmers were flourishing, enlarging their holdings by exchanging strips and by continuing the creeping enclosure of the open land around the villages, generally without any overall plan.

Throughout the eighteenth century, therefore, there was an increasingly vociferous demand all over the country for the subdivision and enclosure of the common fields, particularly from the landed gentry who were experimenting with new techniques in agriculture such as those introduced by Townsend and Tull, and who wanted more cheap land. There was also politicians amongst the gentry who fore-saw opposition from the independent commoner.

The earlier enclosures were made in the piecemeal manner described above, or by Act of Parliament. Generally a group of influential landowners (representing at least a third of the land area within a township) who wished to enclose, usually the lord of the manor and one or two of his associates, would petition Parliament. In due course a Bill would be introduced and referred to a committee which was almost always biased, but was intended to receive petitions against the Bill. The Bill would then be returned to the house, passed, sent to the Lords and in due course

it received the Royal Assent.

The Bill named Commissioners, generally three in number and usually lawyers, who undertook a survey of the common land involved, extinguished common rights and reallocated the land amongst the Bill's promoters and the common right holders - and promoters taking the larger proportion. The small man lost all along the line. He was poorly represented at a biased tribunal, lost his commoner's rights and often his piece of land as well and was thus forced to become a labourer on one of the larger holdings for a meagre wage when the cost of living was rising.

In the reigns of Queen Ann, George I and George II, 244 Enclosure Acts involving 338,177 acres were passed.

By about 1800 then, the counties of eastern England - Kent, Essex, Sussex and parts of Suffolk were full of hedges. Some of these enclosures seem, however, to ante-date the mediaeval period; it is suggested that they may be Jutish or even Belgic in origin. Western and northern England also seem to have been enclosed very early by "Celtic" peoples. Less than 2% of Northumberland, for instance, was involved in the Enclosures Acts. It was the belt of country between these two areas with which the Enclosure Acts were principally concerned - Northamptonshire, Warwickshire, Bedfordshire, Leicestershire, and parts of Lincolnshire and Yorkshire, and the Cotswolds.

Three General Enclosure Acts, in the first part of the nineteenth century, particularly that of 1844, simplified the procedure and the completion of the Enclosures soon followed. Today only a comparatively small proportion of the land remains as unenclosed common - the wild tracts of Dartmoor and Exmoor, the New Forest, Cannock Chase, scattered patches of heathland in

East Anglia and Dorset and the hills and fells of the north of England and Wales remain as open land as they have done for three or four thousand years.

#### Scotland and Ireland.

The pattern of holdings in Ireland has traditionally been one of small units and field-plots; as in England however, the pattern of hedged fields as it is seen today is of no great age. Some small crofts and enclosures may be of considerable antiquity but these form a small proportion of the total area. The present régime is mainly the result of the agrarian revolution which affected Ireland between 1750 and 1850. The Irish run-rig or run-dale system according to E. Estyn Evans (1957):-

"has escaped the notice of historians because the revolution that broke it down was a prolonged and silent one, involving no Enclosure Acts such as those that record the disappearance of the English openfields. Under the Irish system it was the practice, in some areas at least, for the plots to change hands periodically among the co-partners by the casting of lots. Thus the transition to consolidated holdings was easier than under the English system, where scattered plough strips were apparently permanently held."

In Ireland it was the Land Acts (1869 - 1925), under which the former tenants became their own landlords, rather than the Enclosure Acts that were significant.

The run-dale system, as accounts show it in its decline in the nineteenth century, was, Evans continues "a diseased system that had long outlived its purpose." Contemporary accounts of certain clachans in Donegal describe how "One poor man who had his inheritance in thirty-two different places, abandoned them in utter despair of ever being able to make them out," and how "In

one instance a small field of about half an acre was shared by twenty-six people." Lord George Hill (1846).

With the Land Acts and the appointment of Land Officers the transition from the rural squalour and chaos of the run-dale system to "Peasant proprietorship" and agricultueal improvement came relatively painlessly.\*

In Scotland, enclosure and the agricultural improvement that accompanied it seem to have proceeded along lines broadly similar to those of England, enclosures being undertaken by individuals or small groups of landowners, F. Rainsford-Hannay (1957) relates how some of the first enclosures in Scotland were undertaken on the lands of Palgown in the west of the Stewarty of Kirkcudbright:-

"Somewhere about 1710, when the early Enclosure Acts were passed, the brothers McKie..... leased pieces of land to people who would work for them in the summer.

In the spring these people took to the hills with tents of sorts and poles. In a very few days they had built themselves huts of turf and stone. Heather thatched the roofs and heather made their beds. The huts can have differed little from the "shielings" to which Highlanders migrated every year on the first of May for the summer grazing. The brothers McKie were their own foremen, and in a year or two many square miles of otherwise useless land were enclosed by dry stone dykes\*\*; fine strong erections, and the value of the McKies' land was increased at least fourfold."

This example was followed throughout the eighteenth and nineteenth centuries by many landowners in Scotland. We have, for example, an account of the activities of one Archibald Grant of Monëymask, who brought about great improvements to his lands in

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\* The misery caused by the potato famine is of course a separate issue and need not be considered here.

\*\* Dry-stone walls.

Aberdeenshire by clearing the land of stone and constructing dykes from 1719 onwards. Here for example is his contract with William Denny, tenant of Dykehead, made in 1739:-

"To build a dry stone dyke to enclose the corner between the road and Dykehead and Master Park, and to enclose in their divisions and straight lines, the grass fold of Dykehead, taking it to the Inverdyke and to the road to Inver of Six Quarters hight (sic) of good stone wall, with three rows of faile\* at three shilling Scots per ell\*\* in length. The stones for the said three folds to be taken from within, as long as there are any, both great and small. And I do give sixteen yoking of my oxen and puddock\*\*\* and two men to attend you, and bring in the big found stones\*\*\*\*."

One of the traditional reasons for the building of dry stone walls or dykes has been to clear the land of stones. Perhaps the most impressive structure built with this in view was the Kingswell Consumption Dyke, also in Aberdeenshire, which is 27 feet wide at the top, 6 feet high and 500 yards long. It seems to have been built about 1780. Many of the walls in the Mourne Mountains in Co. Down are similar "Monumental relics of secular toil; such walls may record by their successive accretions periods of agricultural activity through the ages." (E. Estyn Evans, 1957 and see Fig. 2a).

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\*Faile - peat sods.

\*\* Ell - 3ft. 1½ins.

\*\*\* Puddock - sled.

\*\*\*\* Found stones - Foundation stones.

## WALLS, FENCES AND HEDGES.

In the previous chapter an attempt has been made, through a historical analysis of the development of field boundaries in the British Isles, to explain the origins of the existing patterns. In this section some account will be given of the various forms that these boundaries take, and a comparison made with types found elsewhere in the Atlantic Fringes and in other parts of the world.

There is a wide range of wall and fence-types in Europe, and a classification is by no means easy. There is a paucity of published material from many parts; and often it is difficult to know on what criteria a classification should be based. The author's suggested classification, based largely on the material used in construction, and of an ad hoc character, is given below and will be used throughout this section.

A short description of the types mentioned in the classification will be given, together with some notes on their distribution and their relationship to present-day and former patterns of land-use and the physical environment of the areas in which they are found.

## A Classification of Wall and Fence Types.

1. Walls:-
  - a) Drystone walls:-
    - i. Simple:- Subdivision  
March.
    - ii. Locked-top types.
    - iii. Galloway-Dykes
    - iv. Loosely built walls - Irish type.
    - v. Serpentine walls.
  - b) Walls that are partly dry but in which a little mortar or cement is used.
  - c) Walls in which mortar is extensively used.
  - d) Walls of turf and stone.
  - e) Turf walls.
  - f) Thatched walls.
  - g) Earth and mud banks.
11. Fences:-
  - a) Wooden fences:-
    - i. Chock and log fences.
    - ii. Simple split-log fences.
    - iii. "Snake" fences.
    - iv. Russell fences.
    - v. Dog-leg fences.
    - vi. Scandinavian fences.
    - vii. Lapland Reindeer fences.
    - viii. Baltic fences.
    - ix. Upright stake fences.
  - b) Osier fences.
  - c) Reed fences.

d) Slate fences.

e) Fences of other materials.

III. Hedges:- a) Laid.

b) Unlaid.

IV. Compound types - Generally a combination of a hedge with one or other of the other types, e.g. the Irish Landlord fence.

## Dry Stone Walls and Their History.

Dry stone walling was used by the Neolithic builders of the chambered tombs, such as Belas Knapp in Gloucestershire, and also in early Iron Age times, e.g. enclosures in Zennor parish in Cornwall. In northern England and in Scotland the technique was widely used in Iron Age, Romano-British and Dark Age times for structures such as forts, brochs, and farm enclosures. In Ireland, in Ulster and Munster, walls have been found under many feet of peat. Examples from Co. Derry have been described by Dr. Oliver Davies as comprising irregularly heaped stone slabs with standing stones at intervals. Sometimes only these standing stones remain to baffle the modern observer. (E. Estyn Evans 1957)\*

Just how much continuity there was between this ancient tradition of dry stone walling and the technique of Enclosure times and later is uncertain. F. Rainsford-Hannay (1957) speaks of the "traditions lingering on in the hills." E.E. Evans (1957) also suggests that the skills remained in currency for millennia, to "blossom forth" into the intricate tracery of walls at the time of the Enclosures. E.S. Wood (1963) in his article on dry-stone walling is not convinced of this.

In any event, the building of dry-stone walls has been a definite and skilled craft since the Enclosure period (See Chapter 2). The Reports on the State of Agriculture made for the Board of Agriculture between 1790 and 1810 frequently include a section of fences and walls and those concerned with northern England give a good deal of information on the size and cost of dry-stone walling.

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\* But note that Myers (1965) has suggested that these isolated rows of standing stones might have supported strands of vegetable fibre to form the predecessor of the modern wire fence.

Brown, in his account of the West Riding of Yorkshire in 1799 reports:-

"As to the manner of inclosing, we know no fence equal to the quick-set hedge of white thorn. Perhaps stone walls are more eligible where sheep are kept. These we would recommend to be built, or rather lipped with lime and to be six quarters in height\*, with an additional quarter by way of capping. Probably this in the long run is the cheapest fence but being very expensive at first, it should in every case be executed by the proprietor, the tenant paying the legal interests and outlays."

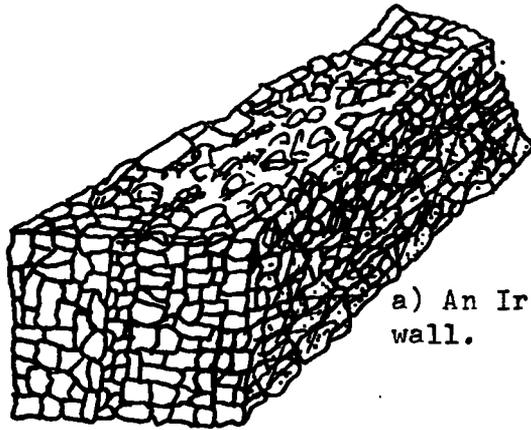
Farey made a lengthy report on the agriculture of Derbyshire in the early years of the nineteenth century, and has much to say about walling. He states for example:-

"Supposing each five acre field fenced on three sides to allow for fences against roads and irregular fields, and allowing twelve links or eight feet wide for a hedge or ditch, the quantity of land so occupied is 39 Perches or one twentieth part of the field; and if the fences are walls, as is general in the district alluded to, occupying or spoiling not more than four links wide, the quantity of land is one sixtieth of the whole."

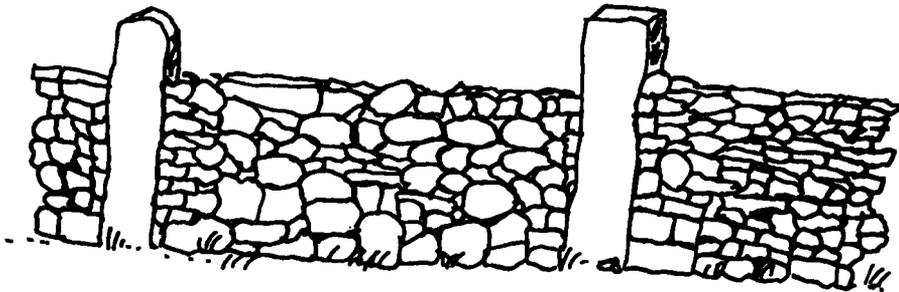
In upland areas where agricultural land of any sort is at a premium, this loss of land to fences is a major consideration. Raistrick, commenting on this also points out that a hedge takes nourishment from the soil, requires frequent cutting and laying and even replacement of plants. A well-built wall is good for a century or more and the cost of the wall including the original construction and occasional infilling of gaps is a fraction of that required for the regular trimming of a hedge. Farey continues by pointing out that a dry-stone wall is no sooner completed, than the full benefit

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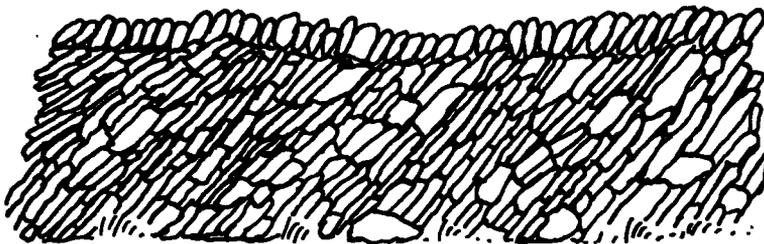
\* i. e. six quarter yards or 4ft. 6ins.



a) An Irish compound drystone wall.



b) Gate in an Irish drystone wall blocked by a temporary stone barrier.



c) Drystone wall in the Isle of Purbeck, Dorset.

Fig. 2.

is reaped. All these factors would be important where the environment is unfavourable and optimum use must be made of any patch of cultivable land.

Elsewhere Farey states:-

"Wall fences in the Peak Hundreds, are usually dry without mortar, five feet high, with a nine inch coping of stones on each of them, for boundaries; and four feet and a half, and a nine inch coping for interval fences; the cost is from 6s. to 10s and 12s per rood, of seven yards in length, for getting the stone, carting and building...."

Raistrick studied a large number of Enclosure awards and made a number of measurements in northern England. He found that heights varied from 5ft. 3ins to 6ft. 0ins, the width at the base from 2ft 4ins to 3ft. 0ins and at the top from 1ft. 0ins to 1ft. 4ins. Almost always there are 2l throughs or throughstones to the rood, but vary from 2 rows (Yorkshire) to 3 rows (High Peak of Derbyshire). The rather less extensive field measurements of the present writer confirm this general picture. (See Plate 5).

In those parts of southern England where drystone walling is practised, areas such as the Cotswolds and the Isle of Purbeck\*, where the well-bedded Jurassic limestones crop, the average heights of the walls are much less; 4ft would be typical in most parts of Gloucestershire; these walls also have a very much steeper batter than their northern counterparts.

\*In the Isle of Purbeck, where the main walling material is Purbeck limestone from the lower Jurassic, a striking feature of many walls is the arrangement of successive layers of stones at an angle so that the general appearance of the wall is one of strata gently dipping in one direction, Fig. 2c.

This variation in height is dependent on the material available for building the walls, and hence to some extent the geology of the area. Where the bulk of the stone is land clearings and rounded boulders, the wall base is made wide and the wall is given a good batter. In some areas, such as Lower Airedale, and parts of Derbyshire where thin bedded Coal Measure and Millstone Grit flagstones are abundant, the walls are thinner and steeper faced, as they are in parts of the Lake District, Wales and Shropshire where the local material is Palaeozoic slates.

In an important wall such as one adjacent to a highway, the coping - "capstones", "tops" or "copings" - is sometimes set in a lime-sand mortar. This binds the top together and to a large extent preserves the wall from "gapping" which otherwise might be initiated by sheep jumping and knocking off stones. Rainsford-Hannay (1957) strongly disapproves of this practice, pointing out that the wall will settle away from the coping and that if a vehicle crashes into such a wall, many yards will be dragged out.

## Building the Walls.

Whether the craft of drystone walling had continued in practice since prehistoric times, or whether it was rediscovered in enclosure times has not been conclusively settled, but it certainly has existed in very much the same form since the period of the enclosures. It is interesting to note that drystone walling was and is a craft in the true sense of the term, some men obtaining their livelihood from doing nothing else. Hedgers, gate-makers and such people at best followed their crafts concerned part-time or seasonally, making out with other work for much of the time. This may go some way to explain the continuity of form in drystone walling, and the absence of this in certain other features, such as field-gates.

The craft has been documented by Raistrick (1946) and Rainsford-Hannay (1957) and the account that follows is in part based on their work supplemented by my own observations in Yorkshire and elsewhere. A glossary of terms used in drystone walling is given below:-

## Glossary of Terms used in Drystone Walling.

- Batter:** A drystone wall slopes back with a "batter" on each side. A wall might thus be 34 inches wide at the base and 14 inches wide at the top.
- Cap:** See cope.
- Clonk:** Large stone in the single below the cope.
- Cope:** Well shaped stones packed and blocked tightly on the coverband of a double dyke. Fig 6.
- Coverband; cover:** Large flattish stones laid along the top of a double dyke. Fig. 6.
- Creak:** See head.
- Cripple hole:** A small rectangular opening sometimes made at the bottom of the wall for drainage or the passage of sheep. Fig. 5b.
- Double, double dyke:** That part of the dyke or wall where double rows of stones are laid.
- Filling:** See hearting.
- Frame:** A wooden structure, made to fit a section of the wall, composed of four slats of wood and resembling the legs of a trestle. Fig. 3.
- Head, wall-head:** A clean, finished division line terminating the length of wall built by one man, often with some mark or symbol to indicate the identity of the craftsman. Fig. 5a.
- Hearting:** Small stones, well packed inside the double and set to connect with the side stones, so holding the wall together.

- Hogg-hole:** See cripple hole. Sheep in their second year are called hoggets, so the gap left in the drystone wall for their passage is occasionally called a hogg-hole or hogget-hole.
- Lift:** The point where the wall rises above the grass.
- Locked-top:** Where the cope consists of longish flat stones set vertically to form a level top, and smaller stones wedged in between to hold it firm.
- Lunky hole:** See cripple hole.
- Pins:** Small wedging stones tapped into the interstices, "They render the dyke rabbit-proof and give it a little more strength;" Rainsford-Hannay (1957).
- Rood:** A measure of length equal to the amount of wall that one man could build in a day, varying from district according to stone type, but generally about six or seven yards.\*
- Scarcement:** The extra width of a wall at its base, i. e. the difference between the width of the foundation stones and the width of the wall itself at the grass. 2 inches each side is usual.
- Single, single dyke:** That part where large stones are used the full width of the wall.
- Sheep creep:** See cripple hole.
- Throughband, through:** Large flattish stones, slightly larger than the wall is wide, set across the wall during the building to tie the stones of the double.

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\*But note in this context Large (1964) writing on drystone wallers of the Cotswolds states that 3 yards a day is a typical rate of building.

The first stage in the construction of a dry-stone wall is the marking out of a line using pegs and string. When this has been done a shallow trench is dug, about four feet wide, and the turf and soil is cleared. The construction of the foundation of the wall varies slightly. Rainsford-Hannay, describing the work of the Scots wallers with whom he was most familiar, says the trench- which was generally about 6 ins. in depth - was packed tight with flat stones "the size of ones hand." Raistrick in his description of Yorkshire wallers says "The foundation... is made by setting two rows of squarish boulders with their squared ends faced onto the two edges of the wall bottom, and their ends inwards." In other words the construction of the wall commences straight into the trench.

In any event, the foundation - or the lowermost layer on stones - is the most important; where a wall is found that has tumbled down, it is usually the case that the foundations have shifted or tilted. After the foundation is laid, the strings are brought about two inches inwards on either side and tied to the bases of two frames, which are set up vertically astride the trench. The construction of the wall then continues in the following way:- two rows of stones are laid with their long axes stretching into the wall, their outside faces touching the strings; the space between them is packed with smaller stones - the "hearting" or "filling". The next row of "course" is laid so that the stone covers a joint or break in the row below - "breaking joint" - and recessed a little to form the "batter."

Each stone is carefully rested on two below, as nearly horizontal as possible,\* and firmly wedged in by the heartings.

As the wall grows, the stones used become smaller and smaller and successive courses shallower, and as the work rises the guide strings are moved up the frames.

Rows of throughs or throughbands are built into the wall as the work progresses, the first being generally built in between one and two feet above the "lift". Another set is put in about four feet up, and in some walls, especially in Derbyshire, a third set is inserted just below the copings. These are necessary to bind the two faces of the wall together and to prevent it from "bellying out" and eventually collapsing. The stones used as throughs are sometimes just the width of the wall at the part they are built in but frequently they are longer, sticking out several inches from the wall. Large flattish stones are needed for this purpose, and may well have to be carted from some distance; sandstone flags are particularly suitable.

Building continues until the wall nears the height required - it will have narrowed to about 14 ins. in width - when a layer of covers is put on the top of the wall. These are usually thin slabby

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\*When stones are flattish, derived from thinly bedded rocks a slight outward and downward tilt is given to the stones in the double. This helps throw off rainwater. In Cornwall, the stones are tilted inwards, so that rainwater runs through the centre of the wall. See Fig. 3.

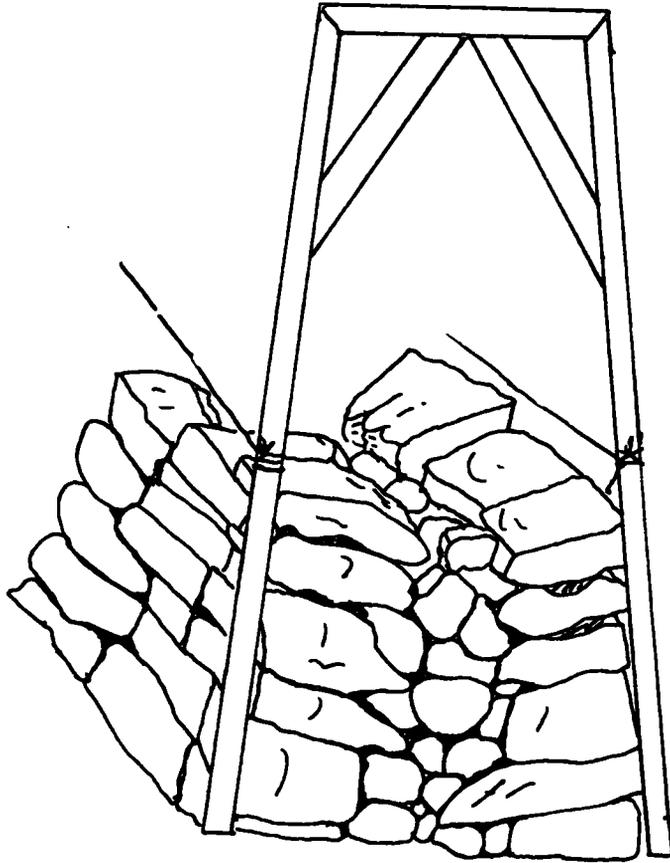


Fig. 3. Building a drystone wall in Cornwall.  
From a photograph in Beddall (1950).

stones similar to those used as throughs. The coping stones are then placed on top of this layer to complete the wall. These last are usually semi-circular, with their diameter the straight side the same as the width of the wall. They are also generally of a slabby nature and usually lean against one another, all in the same direction, usually uphill (Fig. 5a). When the wall "gives" or settles as all walls do from time to time, the caps can adjust themselves. This is of course not possible if mortar is used.

The way in which the wall is capped varies more than most other features of a dry-stone wall, according to the fancy of the craftsmen involved. In well finished walls the capstones may be cut to size with a hammer, and "dressed to the shape of half a cheese." When these well-fitting stones are used in coping there is generally no leaning.

In some areas, e. g. South Scotland, "buck and doe" coping is used, i. e. large and small stones are alternated. (See Fig. 4b). In Ireland an even more elaborate "castellated" type is met with. Occasionally the coverbands immediately below the coping are allowed to project, a few inches from the wall, and so act as a deterrent to jumping sheep.

The finished wall is thus a structure in equilibrium; the main pressures are evenly distributed, the weight being carried down to the foundations through each face of carefully set stones. The throughs prevent the wall from collapsing outwards, the hearting preventing it from caving inwards.

Every stretch of walling is brought to a "wall-head" at openings and at the ends of walls built by or belonging to different people. This is constructed by making a layer of massive throughs built immediately over the footings at the wall ends, followed by two large stones with squared faces, built on to the layer below, and carrying up the stone corner. Throughs and large corner stones alternate right to the top, so that there is a clean join or finish to the wall. On some very steep slopes heads may be included at frequent intervals, for if a wall on a slope starts to collapse, the wall will fall down along a great length if heads are not built, (Fig. 5a).

In all steep walls, and in others, the courses are kept horizontal so that if one follows a course starting at the footings as one goes downhill it will rise to the top of the wall. Also, when a wall traverses a steep hillside it is usual for all the batter to be on the downhill side, the uphill side being almost vertical. This tends to prevent the wall from "bulging" downhill.

Many boundary walls have been built a small stretch at a time by different landlords, each section being terminated by a "wall-head". Sometimes there may be a mark at the base of the wall-head indicating the person responsible for the maintenance of the section.

#### Variations in Type.

- i. Subdivision and March Dykes. The wall in Fig. 6 is the usual "Subdivision dyke" or boundary wall, the specification for which was taken from Rainforth-Hannay's book. "March dykes" - major enclosing walls, are usually much higher - they may be up to 6ft. in height, and generally have two or three courses

of throughbands and these are usually staggered, so that the stones of the upper course are laid above the intervals of the lower one. (Fig. 7).

The upper limit of improved land in Scotland was generally delimited by March dyke. This wall, separating as it does the rough grazing from the green farmland of the lower slopes, is known as the "Head-Dyke" and is a boundary of considerable significance in the geography of Scotland; its importance has been reviewed by I. M. L. Robertston (1949) who stated that the head-dyke in most areas was constructed "before the era of the general enclosure" and that some 34% of the area of Scotland was enclosed by it. Its altitude varies widely, from below 200 ft. to about 1,200 ft. depending on local conditions of soil, climate and aspect.

- ii. The Locked Top. This type of coping was introduced by John MacAdam of Craigenullich in 1759. The coping stones are broad flat slabs generally of whinstones (dolerite). The width of each stone is about 12ins. and they are not more than about 2ins. thick. They are packed tightly together, starting from the lower end, and the specially chosen thin stones are driven in to keep the top firm. This type is also quite common in Ireland but thicker stones of varying heights are used, giving the dyke a castellated appearance.
- iii. The Galloway Dyke. This is quite a striking type of drystone wall, that originated in the counties of Galloway in the south of Scotland early in the enclosure era, but spread to Dumfries, Argyll, Inverness, Roxburgh, Stirling and the Hebrides. It is

also found, presumably introduced by improving landlords, in Galway and Clare in south-west Ireland.

The Galloway-Dyke is seldom built less than 5ft. 3ins. in height and 34 ins. thick at the base. It is generally built double up to about 40 ins. from the lift, hearting and throughbands being inserted as in other types of drystone wall. The next 22 inches or so are constructed "single" of large rough stones; wide interstices are left and no pinning is done. The light thus shows through the wall in many places, and the whole exhibits such a tottering appearance that, it is alleged, no stock will attempt to surmount it. (See Fig 4a).

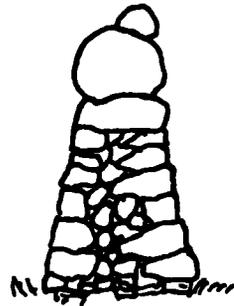
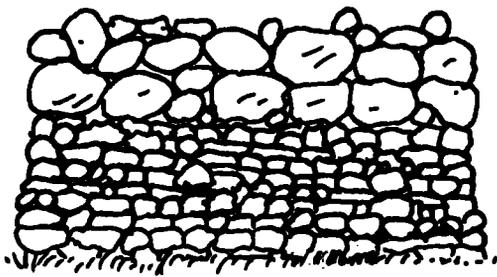
Galloway-Dykes are frequently over 200 years old, and were often mentioned by those compiling the Survey of Agriculture in Scotland between 1800 and 1824. For example the Inverness Report says:-

"These walls have such a tottering and alarming appearance that all kinds of stock are terrified to attempt them, and as an additional recommendation, they require fewer stones and are more expeditiously built and last as double some walls without lime."

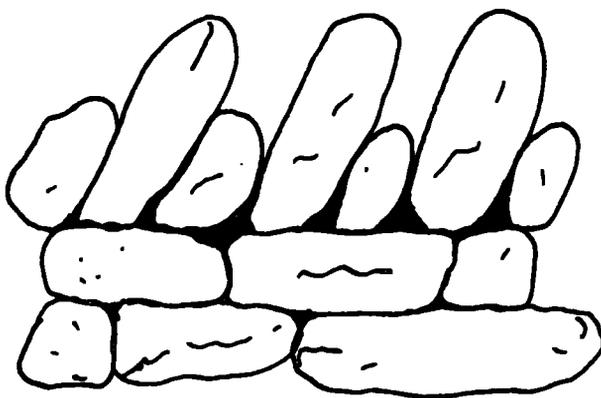
The Hebrides Survey reports:-

"The Galloway-Dyke, a species of enclosure, commended in 1720 in that southern district of Scotland, and now well known and esteemed all over this kingdom, is the most advisable for the Western Isles."

- iv. Loosely built Irish walls. These appear in many places in Ireland where the Galloway Dyke does not occur. They are very loosely constructed walls, frequently only one stone in thickness, although built as they are from the rounded boulders cleared from the land, they may be very much more robust, each layer corresponding to a period of stone clearance. The



a) Galloway-dyke



b) "Buck and doe" coping.

Fig. 4.

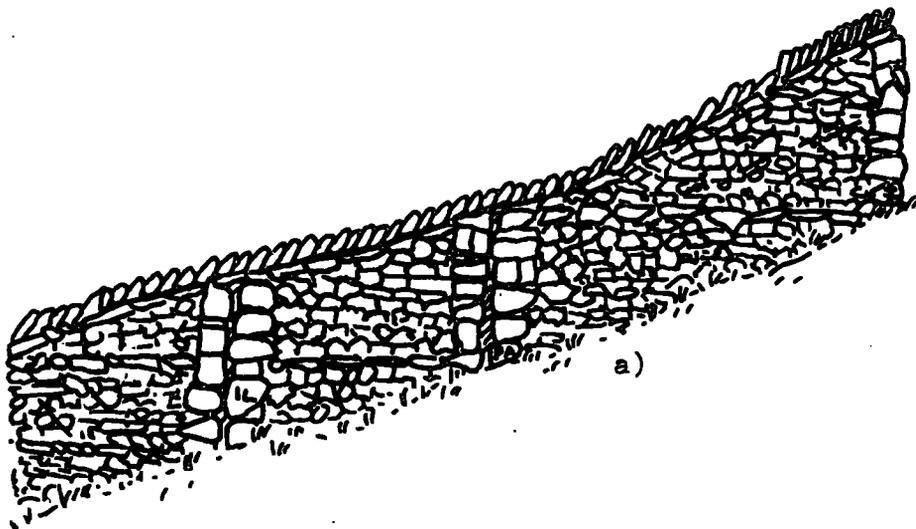
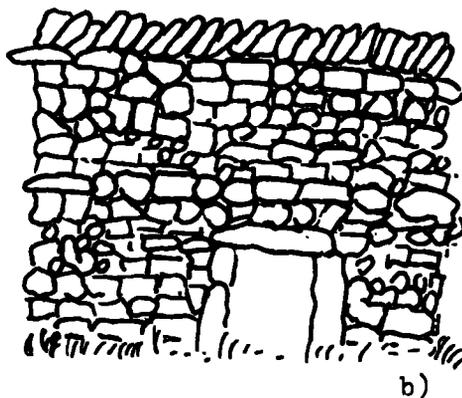


Fig. 5. Drystone walls in the Pennines.

a) Wall on hillside showing construction with wall-heads.

b) Sheep-creep or hogg-hole.



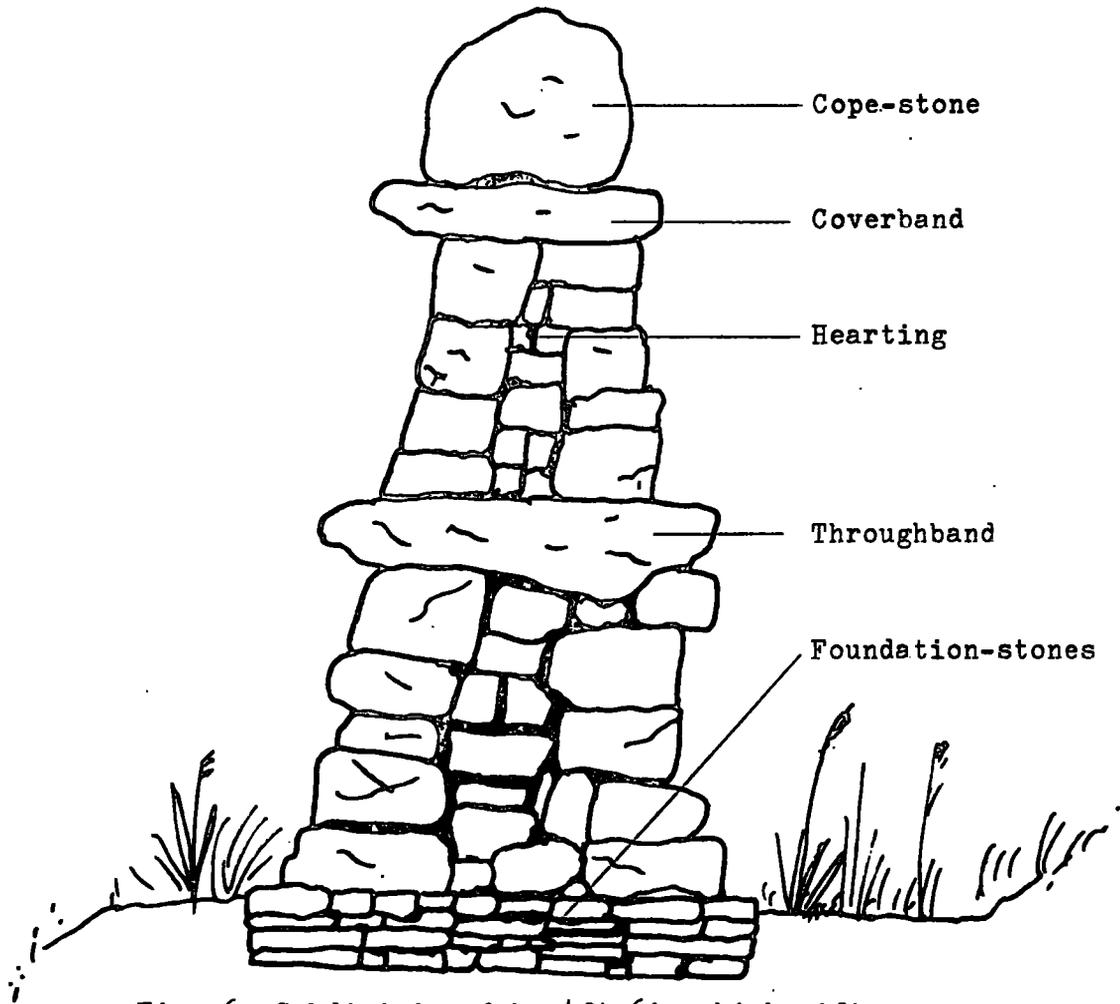
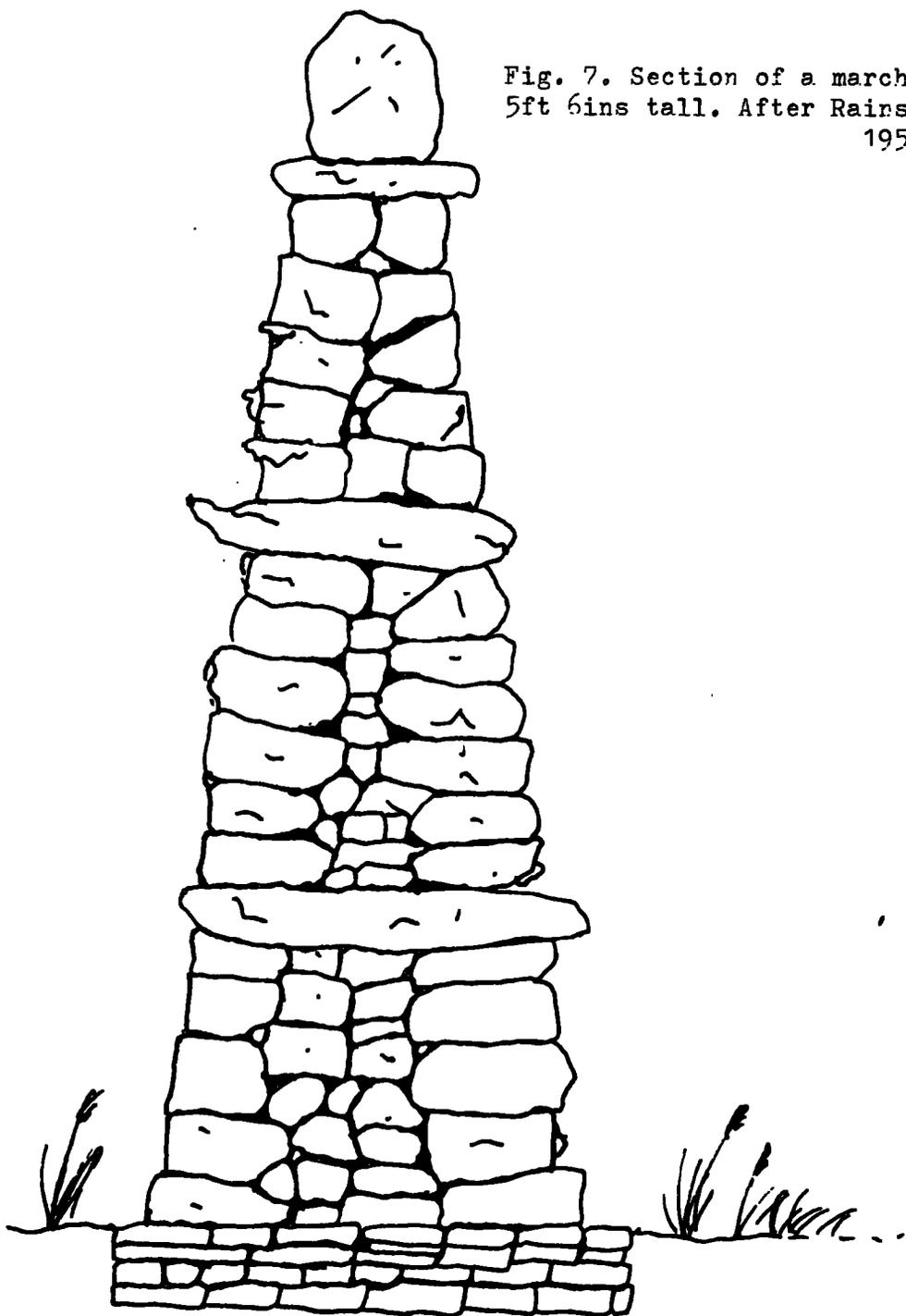


Fig. 6. Subdivision dyke 4ft 6ins high. After Rainsford-Hannay, 1957.

Fig. 7. Section of a march dyke  
5ft 6ins tall. After Rainsford-Fannay,  
1957,



central core of some must be many centuries old. E. Estyn Evans (1957) writes:-

"Over rough ground they (i. e. the walls) pick their way erratically, incorporating great boulders that could not be moved and which, centuries ago perhaps, became the nuclei of small boulders cleared from the fields. Knotted tangles of walls ten or twelve feet thick have resulted, monumental relics of secular toil. Such walls may record by their successive accretions periods of agricultural activity."

There are a large number of these very thick walls in the Mourne mountains where the tiny fields abound with granite boulders of all sizes. They are described in detail by Evans (1951 and 1957) and Dickinson (1952). Similar walls appear in a few places in west Cornwall. See Fig. 2a and Plate 6.

- v. Serpentine Walls. Farmers in the Yorkshire Dales, seeking to maximise shelter for their sheep formerly built some boundary walls along a winding serpentine course. Stock could then almost always find some crannies into which they could creep for protection from the wind in winter. Some excellent examples remain at Sutton-on-Craven in Airedale.

#### Drystone Walling Abroad -

##### In Europe.

Drystone walls similar in many respects to those of the British Isles are found in Brittany, (Monkhouse 1959) and Normandy, and "Some kind of stone walling occurs in the southern region of Limburg, in Holland, but it seems that such walls do not serve as boundaries.... but merely to prevent erosion." (C.Th. Kokke, Personal Communication). On the whole, however, it seems that drystone walling is not widespread in continental western Europe.

Parts of southern Europe on the other hand have had a relatively high population in relation to the resources available for several millennia and the climax forest vegetation has been destroyed by classical times. Stone walling is thus widespread as wood has always been too scarce and expensive to be used for fencing, just as it has been in many parts of Britain.\*

There must be tens of thousands of miles of drystone walling in southern Europe, on the thin stony soils of parts of the south of France, the Iberian Peninsula, Yugoslavia and Greece and on the Mediterranean islands such as Corsica and Malta. The wall-builders of southern Europe seldom tie their walls using throughbands and coping is generally omitted. Rainsford-Hannay (1957) describing the drystone walls of Corsica mentions that they are frequently neglected for long periods and thorns and brambles become established. This, he says, may be useful for a year or two but the roots eventually weaken the work; nowhere on the continent of Europe, in his opinion, is the craft as well-developed as in Britain.

In northern and central Europe, pressure on the forests has been less intense, and wood has constantly been plentiful for fencing and for other purposes. This fact, quite as much as the distribution of suitable stone has been important in determining that while in southern and western Europe stone is widely used for the construction of walls, in central and northern Europe although stone walls do appear, they are generally rather crude and wooden fences are the rule: the whole of rural culture is orientated more towards forest life and the use of wood as a raw material.

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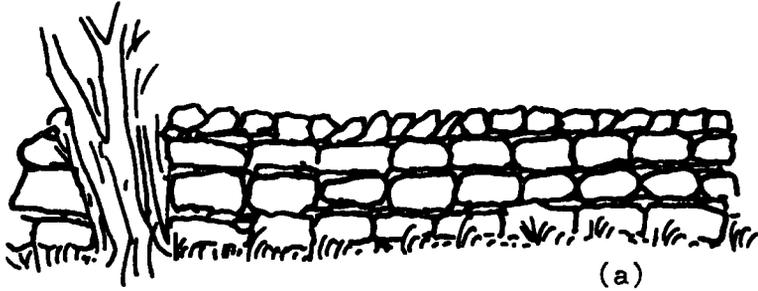
\*Partly because of the upland nature of the country and partly because of similar early deforestation.

## Drystone Walling Abroad - Outside Europe.

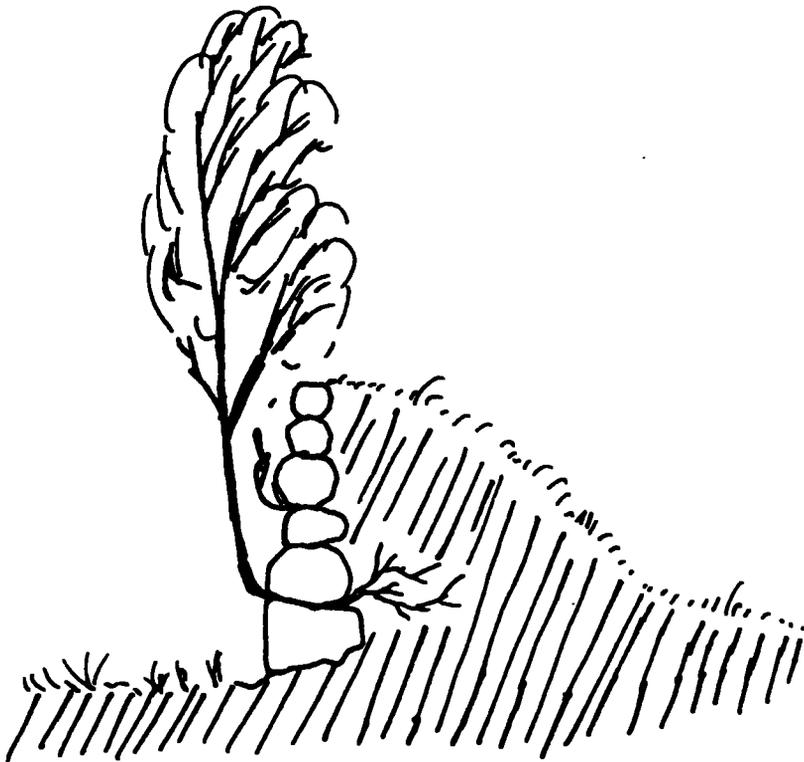
In many cases the building of drystone walls to any extent outside Europe may be attributed to the activities of emigrant Britons or their descendants. Rainsford-Hannay (1957) mentions walls of this type built in Victoria and South Australia by Scots and Yorkshiremen 100 years ago. The best are seen at Colac, Victoria. Similarly wall-builders from the north of England who settled in Otago Province, New Zealand, took their skills with them, H. Croxford (1962).

There are a number of references to drystone walling in North America. Mather and Hart (1954) in a "Fence traverse" between Athens, Georgia and Cleveland, Ohio noted a few "stone fences" particularly in Ohio, and they also state that stone walls were commonly built by the early settlers in glaciated New England. Probably they are far from rare in the eastern states of the U.S.A. In southern Ontario in Canada some very fine walls were built by Scots pioneers in the earlier part of the nineteenth century. Rainsford-Hannay describes some particularly fine examples at a place called Galt as being about 5ft. high and built mainly of large blocks of granite and limestone but with smaller stones set to receive the larger stones of each course. (Fig. 8a).

On the whole however, the early pioneers in the colonies and dominions had plenty of land to choose from; fertile land, devoid of stones and with an abundance of native timber. It was pointless to construct walls on stony ground when deeper soils were available. Accordingly, timber fences were the rule - e.g. the "snake fences" of Canada and the U.S.A. that are described in detail on page 50.



(a)



(b)

Fig. 8: a) Drystone walling at Galt, Ontario. After a photograph in Rainsford-Hannay, 1957.  
B) Galloway hedge or "Irish landlord" hedge.

## "Partly Dry Walls"

Walls built mainly by drystone techniques, but in which some mortar or cement is used, usually to secure the coping stones, have already been mentioned incidentally. They are frequently met with bordering main roads in both the Pennines and the Cotswolds. Although they are unlikely to be damaged by straggling sheep or careless passers-by, walls of this type have several disadvantages. All walls settle a little from time to time, and if the coping is secured the lower part of the wall will settle away from it and gapping will follow. Also, if traffic crashes into a partly cemented wall, many yards will be dragged out. Finally, the crude type of mortar used readily absorbs water, which on freezing will have a disruptive influence on the coping.

### Walls in which Mortar and Cement are Extensively Used.

On the whole walls of this type are of recent origin and cannot be said to have been constructed by traditional craft methods, and so are outside the scope of this study. However, some boundaries of this type are a century or two old, usually around some estate or park. Almost invariably the local stone is used. In north-east Norfolk walls are built of Carrstone from the local Cretaceous rocks. Elsewhere in East Anglia, and also in the North and South Downs, walls are faced with flints which appear in the Upper Chalk and in certain drift deposits derived from it, (Plate 32). Throughout Suffolk, Cambridgeshire and parts of Sussex the raw flints are used. In Norfolk where the ancient craft of flint-knapping continues at Brandon, walls are sometimes faced with flints that have been knapped or cut to a clear rectangular form.

## Walls of Turf and Stone.

In certain localities no coping stones are used. Instead the drystone wall is crowned with pieces of turf. This is done extensively in Devon and Cornwall, in the counties of Roxburgh and Selkirk in Scotland and also in parts of Wales.

R.A. Redfern (1964) describes a turf and stone wall at Lees Common in Derbyshire:-

"It was built around an orchard over 20 years ago by a skilled mason, using alternate layers of stone standing on thick turves. The vegetation in the turves continues to grow and holds the wall firmer than when first erected."

There is no means of knowing whether this is an individual effort on the part of the craftsman who was responsible, or whether it is a traditional technique, perhaps imported from elsewhere. Certainly walls of this type are by no means typical of the area today.

In some areas in west Wales, the Isle of Man, Cornwall and in Ireland, turf-banks are finished with a facing of drystone walling set vertically, (Plates 1011) or in herringbone (Plate 7 ). This last is very common in parts of Ireland, e.g. Co. Antrim and Co. Kerry, and in Cornwall. I feel certain that although in most cases the individual examples of turf and stone walls that we see today are no more than a century or two old, the technique itself, being widespread as it is in these Outer Atlantic Fringe areas, must be of very considerable antiquity. One possibility is that turf and stone walling is a secondary development from building with turf alone, some of the techniques, such as herringboning being borrowed. (See page 47 ).

## Turf Walls.

Turf walls were probably quite widespread in western Europe, as turf is an important element in west European rural culture; it is used in building huts and in particular for roofing in west and south Scandinavia, the north Atlantic Islands and in the British Isles (north-west Scotland and Ireland) and in the Low Countries. Peat burning has a similar Atlantic distribution.\*

E.E. Evans (1956a) writes of the turf walls or "sod-ditches" in Ireland:-

"In windy coastal districts, especially where, as at Magilligan in Co. Londonderry, the sandy soil provides a poor foothold for hedges, the sod ditch comes into its own."

He continues by saying that even within Ireland there is a considerable variation in the way they are constructed. Some regions use a herringbone method of laying the sods similar to that used in the laying of stones in certain types of wall and bank (See above.) He records this method of construction at Ballycastle.

E.S. Wood (1963) refers to turf walls as being often used in Wales and the Isle of Man and they also appear in Scotland. I have seen an example in the Tinto Hills in Lanarkshire.

In England they are widespread in Devon and Cornwall and on Exmoor in Somerset. Wood gives an example from the New Forest in Hampshire and I understand that they also occur in Suffolk.\*\*

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\*For a scholarly account of this and related topics See Erixon 1938.

\*\* Mrs. W. Islip (personal communication).

In the Board of Agriculture Survey of the East Riding of Yorkshire appears the following:-

"Turf-walls four or five feet high with a base of three or four feet and sometimes covered with projecting sod cost from 1/- to 2/- per rood of seven yards running measure."

Wood indicates that these are still built on the Yorkshire Wolds.

Sigurd Erixon (1938) remarks that similar turf-walls are found in parts of southern Scandinavia and adjacent parts of the continent of Europe, but gives no details. I have seen turf-walls on the Island of Texel in the Frisians and C.Th. Kokke of the Dutch "Openluchtmuseum" at Arnhem tells me that they are also found in the "Land von Vollenhove" i. e. the north-western part of the province of Overijssel and in the former island of Wieringen south-east of Texel.\* (See Plate 12 ).

Leechman (1953) gives one or two records of this type in the New World stating that the technique was probably introduced by settlers from Ireland.

Obviously, turf-walls are not nearly so robust as walls constructed from stone, although some of those in the west of England may be a century or so old. It follows, therefore that most of the turf walls in this country cannot greatly ante-date the later phases of the enclosure movement. However, turf was such an important element in the economies of so many rural communities in the Atlantic Fringes of Europe, and turf walling appears to be so widespread today, that I feel sure that the craft must be of great age.

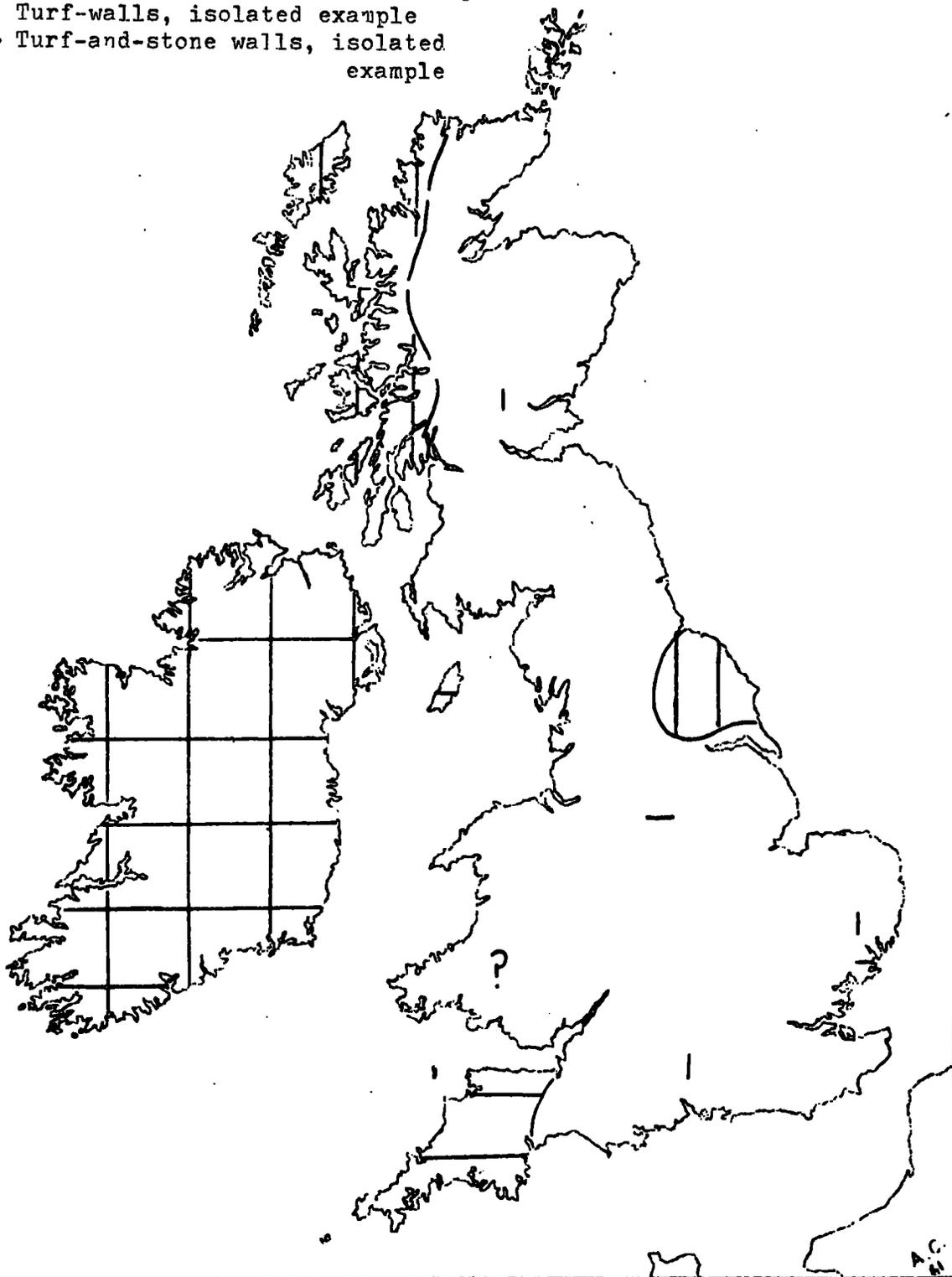
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\*Personal communication.

Fig. 9. Distribution of turf-  
and turf-and-stone walls

Vertical shading:- Turf-walls widespread  
Horizontal shading:- Turf-and-stone walls  
widespread

| Turf-walls, isolated example  
- Turf-and-stone walls, isolated  
example



It would be natural for Neolithic and Iron Age men to use the same materials in the construction of the boundaries as they used in building their huts and shelters. Figure 9 gives a map of the distribution of turf and turf and stone walls, in Britain.

#### Fences of Wood.

An enormous number of variations of the simple wooden fence types exist; Leechman (1953) states that as many as 50 different types could be seen in New York State. All that can be here is to briefly describe some of the most widespread and some of those that for one reason or another are of particular interest.

- i. Chock and Log Fences. These are in many ways the obvious choice of pioneer communities in forested regions. The rude logs are piled one on top of the other, supported by chocks at each end, and secured by stakes. This type has been extensively used in the U.S.A. and Canada at least since the eighteenth century, and it is recorded that in 1871 some 60% of all fences in the U.S.A. were of this type, Leechman (1953).
- ii. Split Log Fences. Here logs are either split or sawn lengthwise and then attached to vertical posts as in Fig. 10a. Variations of this type are extremely common in Europe, the number of horizontal spars and of vertical posts per unit length differing from region to region. Fences of this type are found all over southern and eastern England and in the Midlands. I have also seen them in France, Austria, Holland and in the eastern U.S.A. Leechman (1953) mentions them as occurring in eastern Canada. Although usually the horizontal bars are attached to the vertical posts by means of iron nails, they are sometimes directly morticed

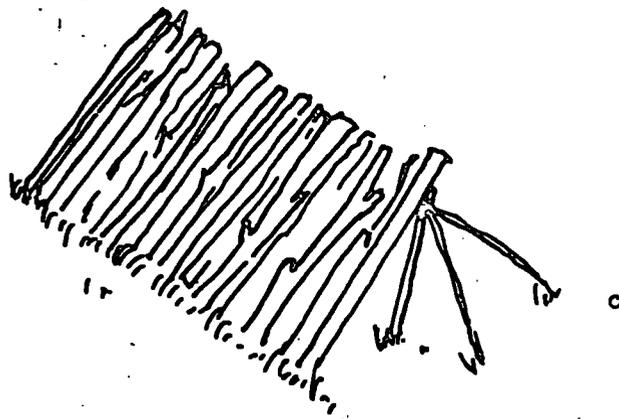
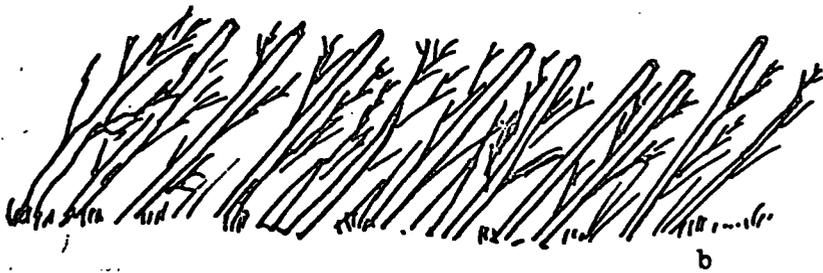
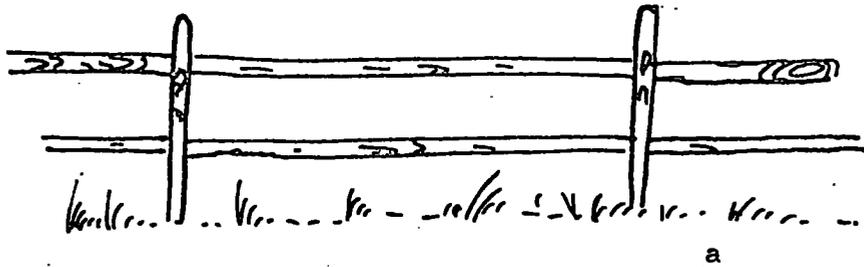


Fig. 10. (a) Split-log fence.  
(b) Scandinavian "dead hedge".  
(c) Lapland Reindeer fence.

in to the uprights and near Westendorf in the Austrian Tyrol I came across a variant in which the roughly hewn boards were spliced to the uprights using a sort of natural rope made from osiers and climbing plants, (See Plate 15 ).

Split-log fences are so simple in construction, that in a forested land they would be the first barriers erected. Undoubtedly they were used in prehistoric times. There are a number of references to wooden fences, presumably of this sort, in Dark Age and Mediaeval Literature - Rohde (1927). They also appear in illustrations in books of garden and country scenes from the fourteenth century onwards.

iii Snake Fences. These, alternatively called Virginia rail, zig-zag or worm fences, are built by splitting logs lengthwise as is described above, but instead of the horizontal spars being nailed to vertical uprights, each set is stacked to interlock with another set at about  $90^{\circ}$  to it. In this way a zig-zag fence can be constructed without any nails, (Plate 13 ). These fences obviously use up a large quantity of timber and occupy a great deal of land, but where both of these are cheap, as they were in the eastern forests of North America when the early settlers and pioneers were moving into the areas in the 18th and 19th centuries, the advantage of ease of construction without metal would be overwhelming.\* Some of these attractive memorials to the industry of the early inhabitants still wind their way round the enclosures next to the log-cabins in several

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\*Many accounts have been published explaining how members of simple rural communities go to great lengths to economise in the use of metals. In this context see A.E. Eaton (1937) "Handicrafts of the Southern Highlands."

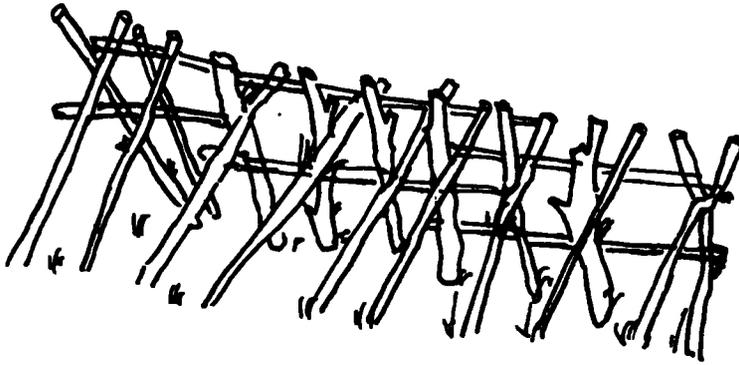
parts of North Carolina, Pennsylvania, Tennessee and Ohio. Leechman (1953) mentions them as occurring in the eastern provinces of Canada. Mather and Hart (1954) are convinced that this type is the earliest used in the New World. Certainly there are a number of early references; Leechman quotes the minutes of Salem for 1685 as noting "a new worme fence about the meeting house at Alloway's Creek." He also describes Peter Kahn, a Finnish botanist who visited the New World in 1749 as saying that they were widespread in New England at that time. Mather and Hart are convinced that the simple split-log fence mentioned above was derived from it. They suggest that the instability of the piles of logs in the snake fence led progressive farmers to bolster them up on each side of the rail junction. I feel, however, that as the split-log type is so widespread in Europe that it is highly probable that the settlers were familiar with it.

I am almost certain that in historic times at least, this type of fence evolved in the New World; certainly I have found no references to any examples in Europe and it would appear very well adapted to the rather special conditions of the pioneer settlements described above.

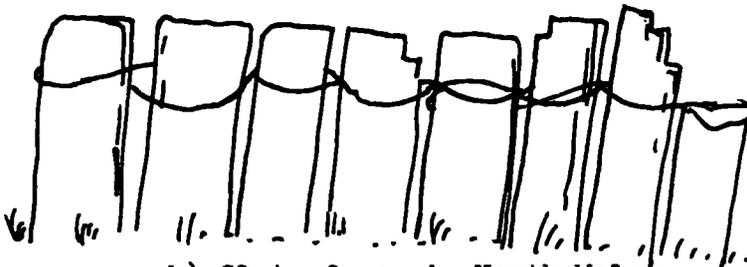
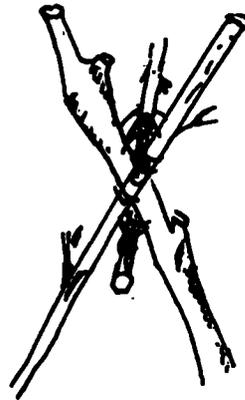
- iv. Russell Fences. This is another type of New World origin. It is perhaps one of the few fence types to have been patented and its originator was at least partly successful in collecting royalties from those who erected fences of this design on their land in Canada at the end of the last century. Tripods of poles are erected at intervals of about 6 or 8 feet, and the horizontal spars are hung from them in loops of wire.
- v. Dog-leg Fences. This type is mentioned by Leechman as occurring

in Nova Scotia, New Brunswick and in Australia. This distribution suggests that it must surely have been introduced to the areas by settlers from Britain but I know of no records of it in this country. Successive pairs of crossed spars are put into the ground across the line of the fence, the fence being formed by the leaning of other logs into the "V" between them.

- vi. Scandinavian Fences. In many parts of Scandinavia and Finland there appears a type of fence, occasionally known as a "dead hedge" in which very roughly trimmed or even almost wholly untrimmed branches are put into the ground at an angle of about  $45^{\circ}$ . They are chiefly used for making enclosures for stock. I have records from a number of localities in central and southern Norway and Sweden, and the sketch in Fig. 10b is based on a photograph from Savolaks, Finland.
- vii Lapland Reindeer Fences. I have found a few references in the literature to a type of enclosure used by the Lapps in the northern part of Scandinavia for the herding of reindeer. Wooden tripods are constructed and logs are leant against them as in Figure 10c. This type may well be derived from the shamanistic culture of Northern Asia, in which types of tripod were used for sacrificial rites, for Lapp culture is basically Shamanistic.
- viii Baltic Type. I have distinguished this type on the basis of a few photographs taken prior to the second world war in Lithuania and Estonia. The upright posts are stuck into the ground in pairs in a criss-cross fashion, horizontal spars being threaded through them in the manner illustrated, in Figure 11a.



a) Baltic fence.



b) Slate fence in North Wales

Fig. 11.

ix Upright Stake Fences. This is another ancient type; stake holes have been found in many sites of Iron Age or earlier date, and they appear in many mediaeval illustrations, Rohde (1927). The familiar barbed wire and chestnut post fence is a modern variant.

#### Osier or Wattle Fences.

These are found in eastern England (where osiers are also used for the construction of wattle hurdles) and in Holland. Formerly this fence was usual throughout the Netherlands and can be seen in a number of old paintings. It still occurs here and there, particularly in the area adjacent to the Rhine, Maas and Waal in the south-eastern part of the province of Zuid-Holland (Albasserwaard). A few examples can also be found in the "Land von Vollenhove" (north-western Overijssel). I feel certain that this type of fence is, or at least was, more widely distributed in western Europe than I have indicated above, for suitable willows and hazels can be found in almost any lowland area and wattle-and-daub was formerly very widely used in Britain and on adjacent parts of the continent in the construction of the walls of farms and barns. (See Plate 46 ).

Leechman (1953) mentions that this type is found in the U.S.A. and Canada, presumably introduced by settlers from Europe.

Osier and Wattle fences cannot, because of their very nature, exist for very long. The craft of wattle-hurdle making is an ancient one however, and it would be a simple matter to extend the principle to the construction of a fence. In the early 15th century illustration in the folio there appears a wattle fence very similar in appearance to the modern type.

### Reed Fences.

Here we have another example of the utilisation of a locally available material. As do the hazel and willow-osiers mentioned above, reeds occur in low-lying marshy areas, and accordingly reed fences have a somewhat similar distribution to wattle fences. They appear today in east Norfolk and in the Cambridgeshire Fens, and E.S. Wood (1963) refers to an example at Iken churchyard in Suffolk. They are also to be found in marshy areas in the south of England, e.g. Romney Marsh in Kent and near Abbotsbury in Dorset. I have seen reed fences identical in every particular with those in East Anglia near the Naardermeer in Holland, where reeds play an important part in the rural economy. See Plate 14.

### Slate Fences.

These represent yet another example of the same principle. In the area of north Wales in which Cambrian and Ordovician slates outcrop, slate fences, made from slabs of slate set on end and tied together may be seen (Fig. 11b). Their approximate distribution is shown in Fig. 12. They do not seem to be represented to any great extent in other areas of lower Palaeozoic rocks in Britain, - in the Lake District or southern Scotland for example, - although Rainsford-Hannay mentions some crude flagstone fences in Caithness and in south Lancashire, and Mrs. D. de L. Nicholls tells me they appear in Cornwall.\* Almost all the Welsh examples date from the nineteenth century, the hey-day of the slate-quarrying industry, some being associated with the garden-plots of the slate-workers houses.

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\*Personal Communication. See Plate 16.

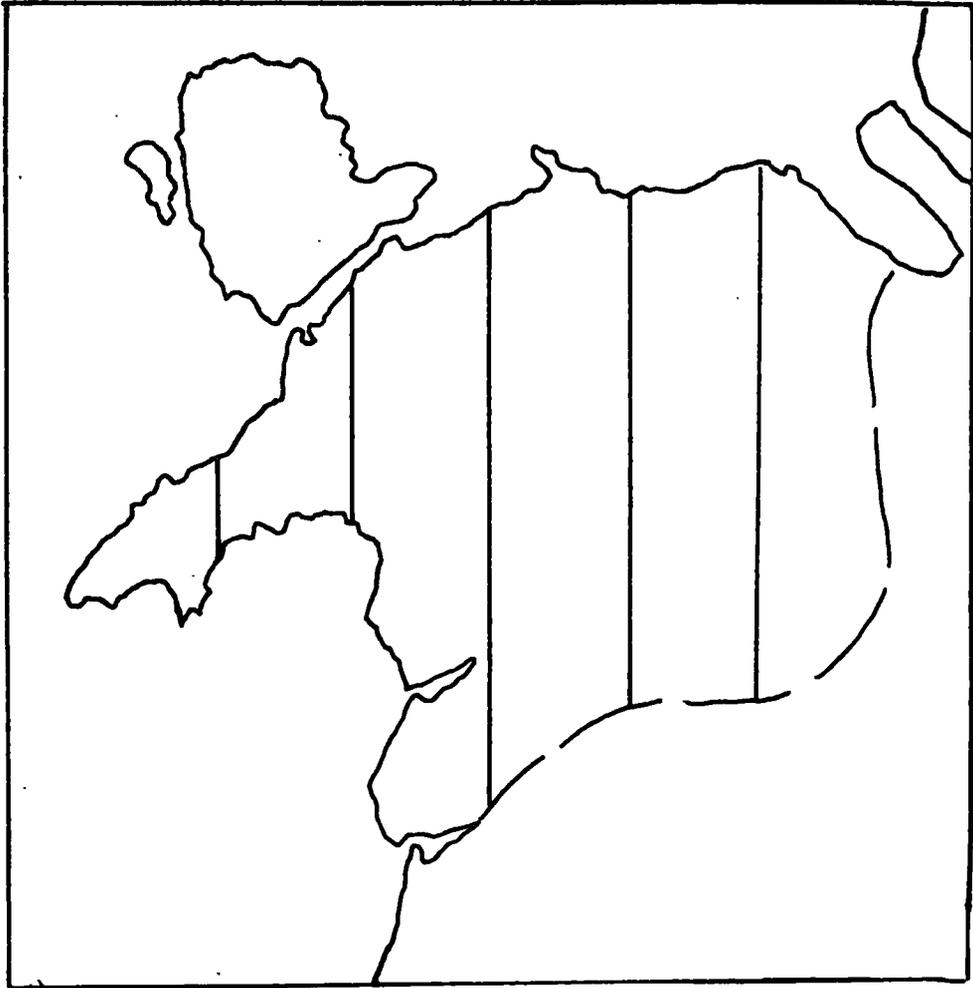


Fig. 12. Distribution of slate fences in Wales.

## Hedges and Hedge-laying.

It has already been shown that while the field-systems of parts of Kent and south-eastern England are of very considerable antiquity, as are those of the western fringes of the country and Wales, the pattern of field boundaries in the stretch of country from Dorset to Durham is of no great age. Charles Vancouver in his "General View of the Agriculture of the County of Cambridge-shire" published in 1794, estimated that of the 147,000 acres of arable land, all but 15,000 acres lay in open fields. Thus much of the pattern of fields and hedgerows in southern and central England is less than 150 years old. Even in those areas where hedges were old-established there was much clearance and reorganisation during the eighteenth and nineteenth centuries. For example John Grant (1844) in an article entitled "A Few Remarks on the Large Hedges and Small Enclosures of Devonshire and the Adjoining Counties," deplored the wastage of land in the occupation of large areas of country by hedges round minute fields. He examined ten parishes calculating the area and the length of hedges in each. He found that the total area of the ten parishes was 36,976 acres, the average area of each parish therefore being 3,700 acres. In the area there were 1,651 miles of hedge, occupying 1,293 acres. Roughly 7 % therefore, of the total area of the farmland was occupied by hedges. The same author also calculated that 10% of the total number of enclosures had an area of less than 1 acre, and a further 27% had an area of between 1 and 2 acres. He pointed out that quite apart from the vast loss of land involved in this state of affairs, the hedges harboured vermin and weeds, shaded the crops and made the small irregularly shaped fields difficult to cultivate. He therefore urged the removal of many of the large,

straggling hedges and reorganisation of the land into a few large fields surrounded by regularly planted hawthorn hedges. He later applied these ideas to one estate with a saving of 20 acres.

The agricultural writers of the late seventeenth, eighteenth and nineteenth centuries give instructions for the making of hedges in great detail, some of their accounts providing interesting insights into the farming conditions of those days. Evelyn gives some notes on hedges and the various types of plants that should be used. He advocated the use of hawthorn Crataegus oxyacanthoides, but suggested that the farmer should "sprinkle some timber trees among your hawthorns - oak, beech, ash, maple, fruit or the like." W.G. Malden (1899) also advocates hawthorn. He lists a very large number of valuable qualities of this species, stressing that it is quick-growing, a hedge being obtained soon after planting, long-lived, uniform in growth, easy to raise and manage, provides an effective barrier to stock and is also extremely tolerant as regards soil conditions, thriving both in chalky and clay soils.

Although hawthorn is by far the most widely used shrub in hedges, Beddall (1950) lists some thirty species that have been employed for this purpose, including alder (Alnus glutinosa), ash (Fraxinus excelsior), beech (Fagus sylvatica), elm (Ulmus campestris), gorse (Ulex europaeus), and yew (Taxus baccata). In Ireland, particularly in the west, the fuchsia (Fuchsia magellanica) is widely used.

All hedges should be laid from time to time to prevent them from becoming overgrown, straggly and harbouring weeds and vermin. Needless to say in these times of expensive labour, many hedges are left unladen. Surprisingly enough, hedge-laying as a craft is

virtually confined to the British Isles; I know of no records of the craft on the continent of Europe. E. Estyn Evans (1957) remarks that it is almost unknown in Ireland.

There are two methods of bringing an overgrown and neglected hedge back into good shape. The first is to cut the hedge right down to within a few inches of the soil and then to allow it to grow up again from the base. This is commonly done in parts of Norfolk and in some northern counties such as Cumberland. This treatment is quite suitable for thorns although few other species would survive such drastic treatment. A disadvantage is that a temporary fence may have to be erected to provide protection until the hedge has re-grown.

The second method involves the technique proper of "pleaching" or "plashing" the hedge. The tools required for this are a felling axe, a billhook and a slasher. The form of the latter two implements varies strikingly from one part of the country to another. (See figure 13 and Lambert (1957)). The principles of laying a hedge are as follows:- As much as possible of the rough undergrowth is cut away using the slasher; many of the actual hedge growths are also removed. The remainder are half severed through with the billhook near the base and bent over at an angle of about  $45^{\circ}$  to the ground, and intertwined around stakes driven into the hedge, as in Fig. 14. Details of the process differ from one part of the country to another; for example in some areas such as Suffolk, Sussex, Kent and Buckinghamshire no stakes are used, but some tall, slender shoots are left uncut and left as "hethers" or binders, being woven in and out of the laid shoots binding the whole hedge together and rendering it stock-proof.

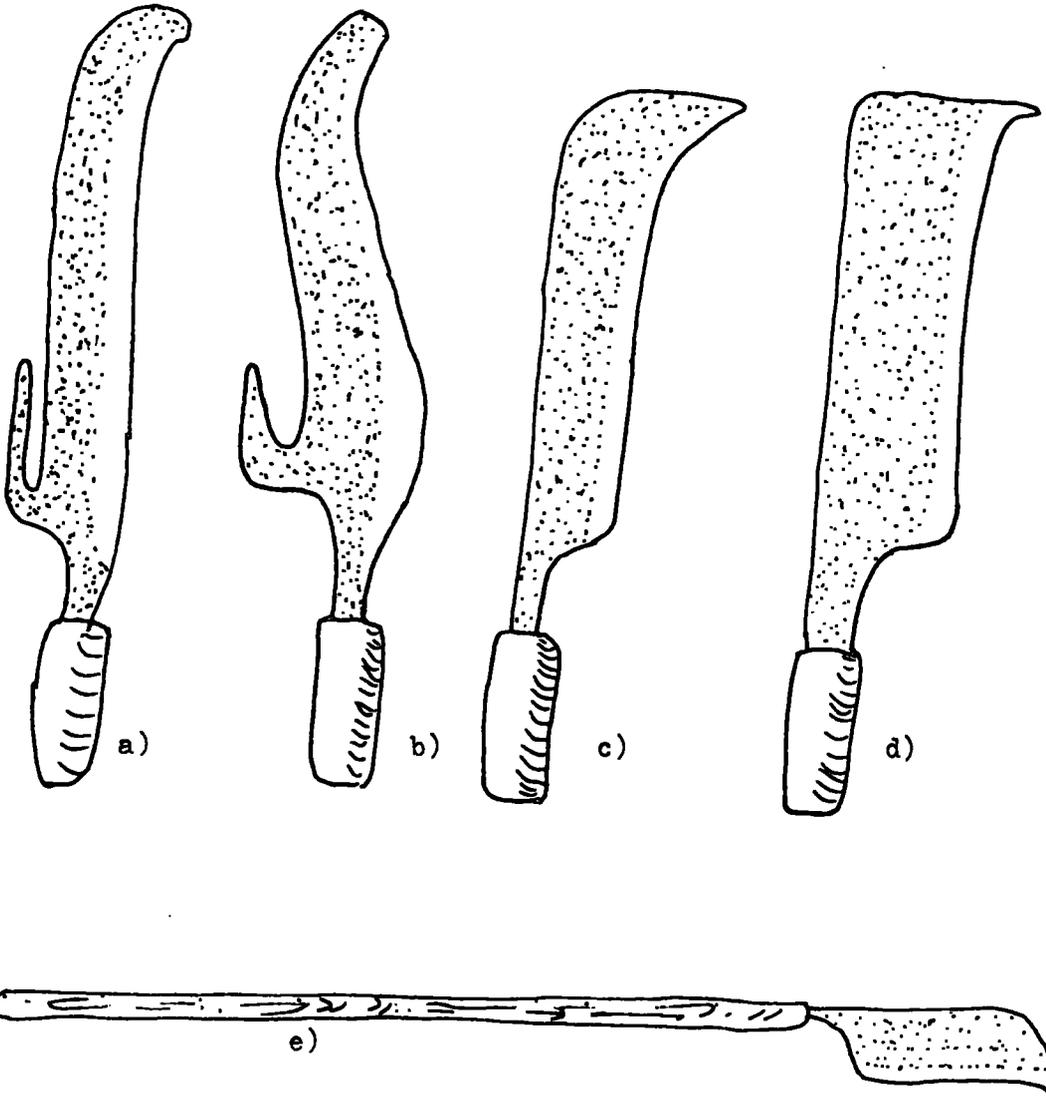


Fig. 13. Fedge-cutting tools:- a) - d) Bill-hooks - Bucks. & Bucks., Cambridge, Norfolk.  
 e) Slasher Hampshire.

(After Lambert, Beddall and field-work by the present writer.)

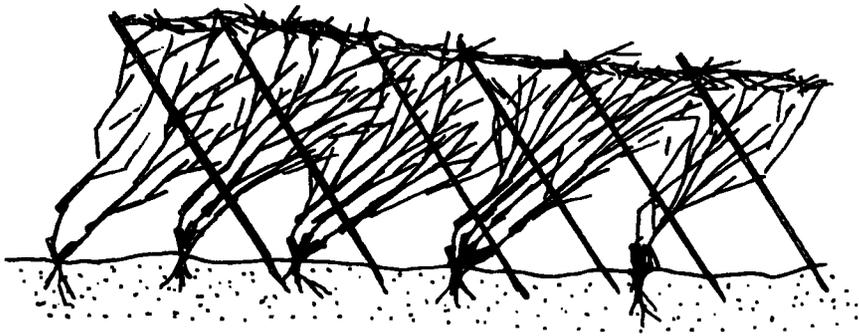


Fig. 14. A well-laid hedge. After a photograph in  
Beddall, 1950.

In recent years many miles of hedges have been uprooted with the swing towards mechanised farming leading to the demand for unbroken stretches of arable land so that combine-harvesters and similar machines may be used extensively. The diagram in Fig. 15 illustrates graphically the gradual increase in the length of hedges in three parishes in Huntingdonshire - an area of about 4,500 acres - throughout the enclosure period, and the recent spectacular decline. The details are as follows:-

<u>Date</u>	<u>Total Length of Hedges</u>	
1350 A.D.	20 miles = Manorial boundaries	
1364	25 miles = Enclosure for deer park and pasture	
1500	28 miles = Private enclosure	
1550	32 miles = Private enclosure	
1680	46 miles = Private enclosure	
1780	58 miles = Enclosure by act of Parliament	
1850	76 miles = Subdivision of existing fields	
1945	70.8 miles = Loss of hedges.	} Swing to mechanised farming.
1963	46.0 miles = Loss of hedges.	
1965	20.8 miles = Loss of hedges.	

The above statistics were very kindly made available to me by Dr. M.D. Hooper of the Monks Wood Experimental Station of the Nature Conservancy (Personal Communication); he states:-

"The mileages are accurate for 1680 and subsequently, being taken from maps, drawings and aerial photographs. Prior to 1680 they are subject to unknown errors. The 1500 and 1550 figures are deduced from litigation over enclosure and the 1364 figure from a licence to empark part of one manor. The errors, though unknown, are probably not large since these early figures fit in quite well with the snippets of information we have from the surrounding parishes."

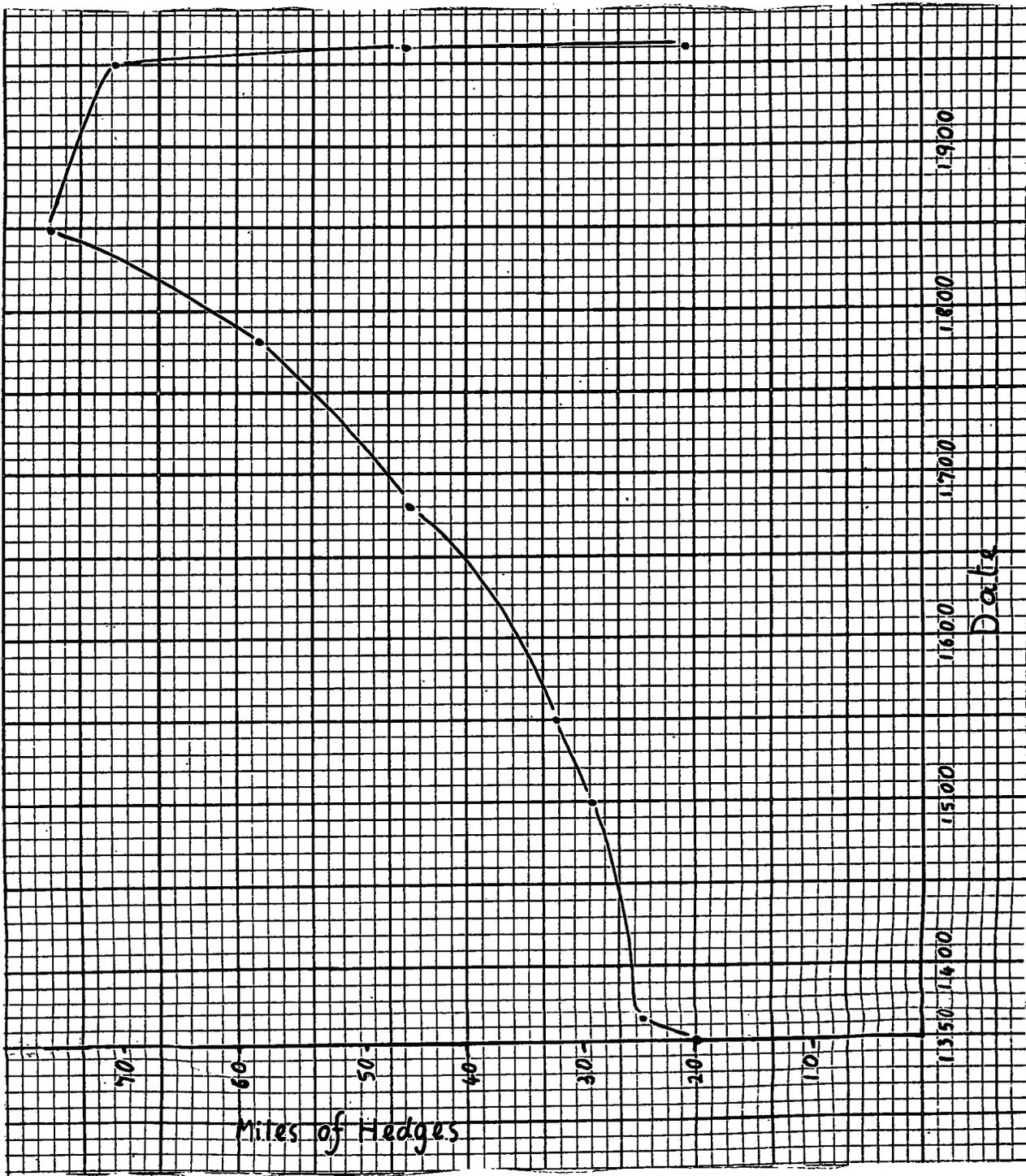


Fig. 15. Graph showing the total mileage of hedges in a group of parishes in Huntingdonshire, after M. Hooper.

This area is typical of much of central England, e.g. Cambridgeshire, Leicestershire, Northamptonshire and Bedfordshire, but Kent, Devon and Cornwall would show very different graphs as these counties were enclosed much earlier (see page 22 ), and have not lost their hedges to the same extent as has Huntingdonshire.

The rate of loss of hedges in Huntingdonshire between 1946 and 1963 was about 0.5 miles per 100 acres but this is about ten times what it was in the west country (e.g. Cornwall 0.03 miles/100 acres and Shropshire 0.07/100 acres.)

Another study of the relative lengths of hedges in various parts of the country was that of Locke (1962); in a sample survey of field-boundaries he estimated the total length of field-boundaries in a number of counties in England and Wales and the proportion of that total that consisted of hedges and then calculated the length of hedge per square mile. His statistics, which admirably show the wide variation throughout the country are tabulated in Fig. 16.

#### Compound Types.

A combination of a mound or bank and a hedge is quite common in western Europe, it is, for example, frequently encountered in Devon, Cornwall and Somerset, and this pattern of "hedges of turf and thorn" in south-west England is reflected in the "bocages" of Normandy and Brittany. F.J. Monkhouse (1959) writes:-

	Area	Length of Boundary	m./sq. m.	% hedge
Yorkshire, N.R.	2128	29,650	13.9	73%
Warwickshire	983	14,375	14.6	92%
Montgomeryshire	797	12,060	15.1	97%
Hertfordshire	632	9,484	15.0	93%
Essex	1528	18,677	12.2	93%
Devonshire	2612	52,724	20.2	93%

Estimated total for Great Britain:-

Hedges	616,000	miles
Timber fences	192,000	miles
Other fences	146,000	miles

Fig. 16, Statistics (in miles) for the length of hedges in Britain. After Locke, 1962.

"Most of this farmland is enclosed in small fields by banks, crowned with a thick hedge, often containing pollarded oaks and ash, though in the west these banks are replaced by dry-stone walls. This is the "bocage" country so characteristic of north-western France, and contrasting markedly with the open hedgeless "plaines", "campagnes" and "champagnes" of the Paris Basin."

Kokke (1965) says that "Big earthen walls occur throughout the provinces of Overijssel, Gelderland and Noord-Brabant and they are always planted with brushwood or little trees."

Another form is the combination of dry-stone wall or dyke and hedge. This is known as the "Galloway Hedge", and is said to have been invented by Hamilton of Baldoon in 1730, and copied extensively by Lord Selkirk of St. Mary's Isle. It is perhaps best suited to ground where the wall trends across a slope.

Rainsford-Hannay (1957) describes its construction in some detail:-

"A right angled cut is made along the slope, the soil being thrown up hill. A double dyke is then built in the cut, one side being vertical against the upright cut. When the dyke reaches the height of the unstirred earth, long thorns are laid horizontally across the dyke with their roots in the soil above. The dyke is then raised to  $4\frac{1}{2}$  feet and finished with a locked top. In two years the thorns turn up the face of the dyke and overtop it."

Many examples are to be found in the area around Creetown, Castle Douglas and Gelston.

The Irish equivalent of the Galloway hedge is the "Hedged ditch". This is an earthen bank faced on one side with stones and planted with quicks of either gorse or hawthorn slipped in near the base amongst the stones, (Fig. 8b and E.E. Evans 1957). The hedged ditch is widespread in lowland areas of Ireland and Evans describes it as being the "approved mode" of enclosing land by the reformers

of the eighteenth and nineteenth centuries. It could well represent a debased form of the Galloway hedge introduced by improving landlords from Scotland.

The hedge-banks associated with the sunken lanes of the west of England might also be included in this category.

Recent work, Hoskins (1965) has suggested that some of these may be approximately dated by the number of species of trees and shrubs growing in them. Working particularly on hedges that border the high-banked hollow ways of Devon and the adjoining parts of Cornwall, Dorset and Somerset, with the aid of old documents such as old charters and leases, this author found that where the banks are Saxon, there may be 10, 11 or even 12 species. Those of Tudor origin typically have about 4 species, while those of the enclosure movement or later have only one or two. "So" he writes "a Devon Hedgebank with 10 species of shrub will be about 1,000 years old." Exceptions do our course occur; Hoskins describes one boundary bank mentioned in a land-charter of 976 that contains only eight species.

Some of these early banks are 12ft or more high and up to 10ft thick. It seems that these were formed as follows; two landowners with adjoining estates seeking to clearly define their property, each set serfs to dig a ditch along the extremity of his holding and throw back the soil on to his own land. The double ditch thus formed was, automatically, a narrow lane enclosed by two banks; it would gradually be worn deeper by the passage of people on foot and packhorses - the latter remained in common use in the western counties for generations after their virtual disappearance from elsewhere - and also by intermittent stream

erosion, particularly where the hollow way was on a steep slope.

Another compound type that occasionally appears is that of a fence- often one of barbed wire - used in conjunction with a drystone wall. The wall and the fence may be arranged parallel to one another, or the wall may be built round the fence. It is used quite widely for sheep enclosures in the north of England, and Leechman (1953) mentions them as occurring in Canada.

## FIELD-GATES.

It must be realised that the study of the traditional patterns of many aspects of rural life in the British Isles is far from easy. Just as the mass-media have taken a heavy toll of the rich body of oral tradition and folk-lore, so mass-production has destroyed much of the variety of material culture of the countryside. Old agricultural implements and tools - spades, mattocks, bill-hooks and froes - are replaced by bright factory-made types and those they replace are sold as scrap, thrown away, put aside in some barn or attic or handed over by some well-wisher to the local museum. So too, a field-gate made by a local craftsman some 50 or 100 years ago, when it falls into disrepair is replaced by an efficient but ugly tubular steel barrier made in Sheffield or Glasgow.

It is extremely difficult to determine which are the original forms of gate, or even the traditional types in any area, and which are more recent intruders. The problem is greatest in parts of south-eastern and central England - areas that have always been in the forefront of agricultural innovation and advance - and it might be argued that it is now too late for any study of this sort to be attempted. The problem is less acute in parts of western and northern England, Scotland and Ireland, and in some remote areas on the continent of Europe it hardly exists.

It is the opinion of the present writer that in spite of the widespread use of factory-produced gates, some regional patterns in the distributions may be distinguished, and sufficient local peculiarities still existing to be worthy of record. Also, it should be possible, using evidence from remote areas coupled with an examination of old prints and drawings to trace the development of

the field-gate.

### The Construction of Gates.

According to the Ministry of Agriculture recommendations (1963) the construction of a modern, well designed, hinged gate is based on the geometrical figure of the triangle, which is the only figure that cannot be altered in shape except by breaking the sides or separating the angles. Although the final form is rectangular, a well-constructed gate includes one or more triangles within the rectangle.

There is considerable local variation in the names used for the various parts of a gate. Those used in Fig. 17 are those used in the Ministry of Agriculture publication, and Fig. 18 shows the terms used by Morland (1962), but Figs. 19 - 22 are an attempt to show some of the dialect terms used. It will be seen, for example, that what is referred to by the Ministry authors as the "hanging stile" is also known as the "harr", "arr", "artree" or "heel". A thorough study of the dialect terms for such things might well be of interest, for it has been shown that such work can throw valuable light on aspects of cultural diffusion, Adams (1956), and Gailey (1964).

The Ministry of Agriculture publication mentioned above goes very thoroughly into practical details:-

"A good gate should be made of sound, seasoned wood which if not cut from the heartwood of a durable species, should be effectively preserved against decay."

Oak, beech, ash, birch, sycamore and a number of softwood conifers, especially larch, are suggested as suitable types and their properties compared. Suitable dimensions are specified, and

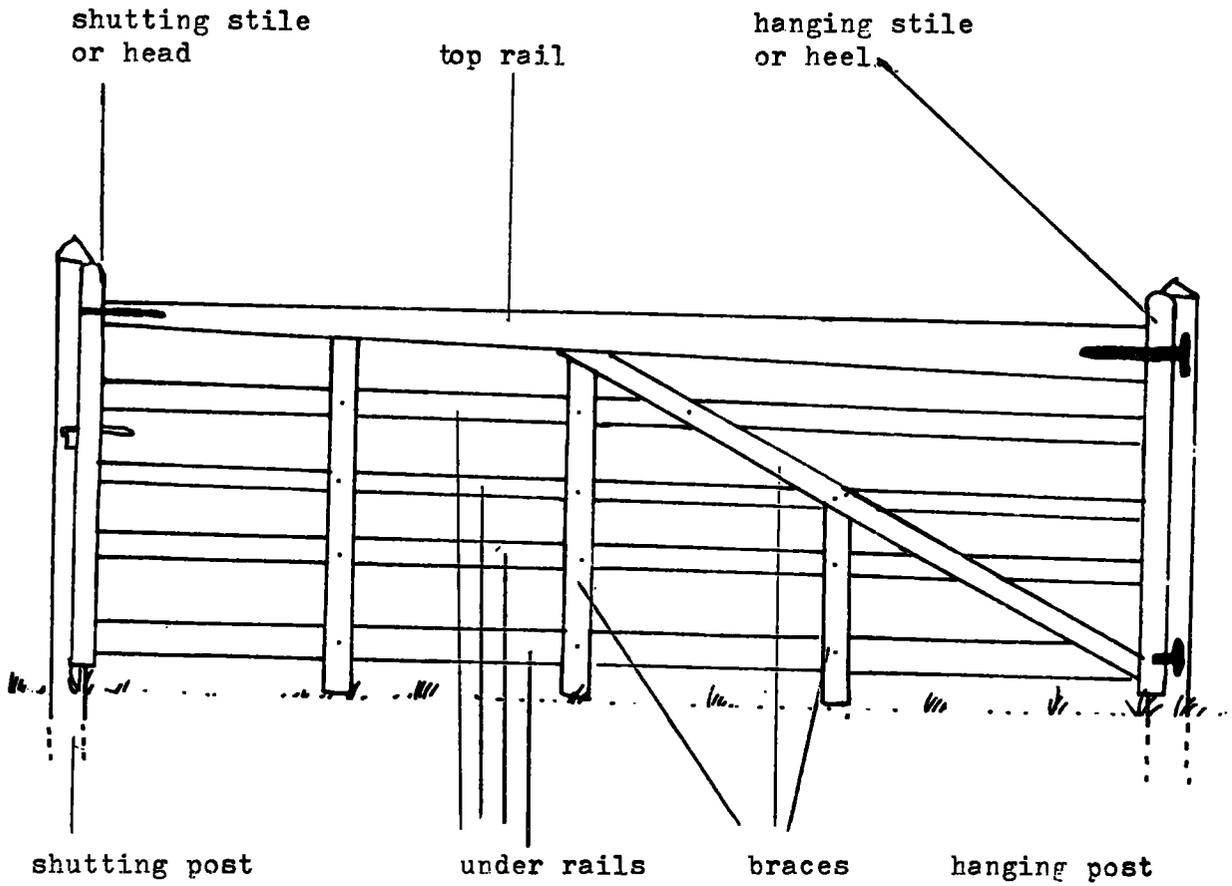


Fig. 17. The parts of a gate, after Ministry of Agriculture authors.

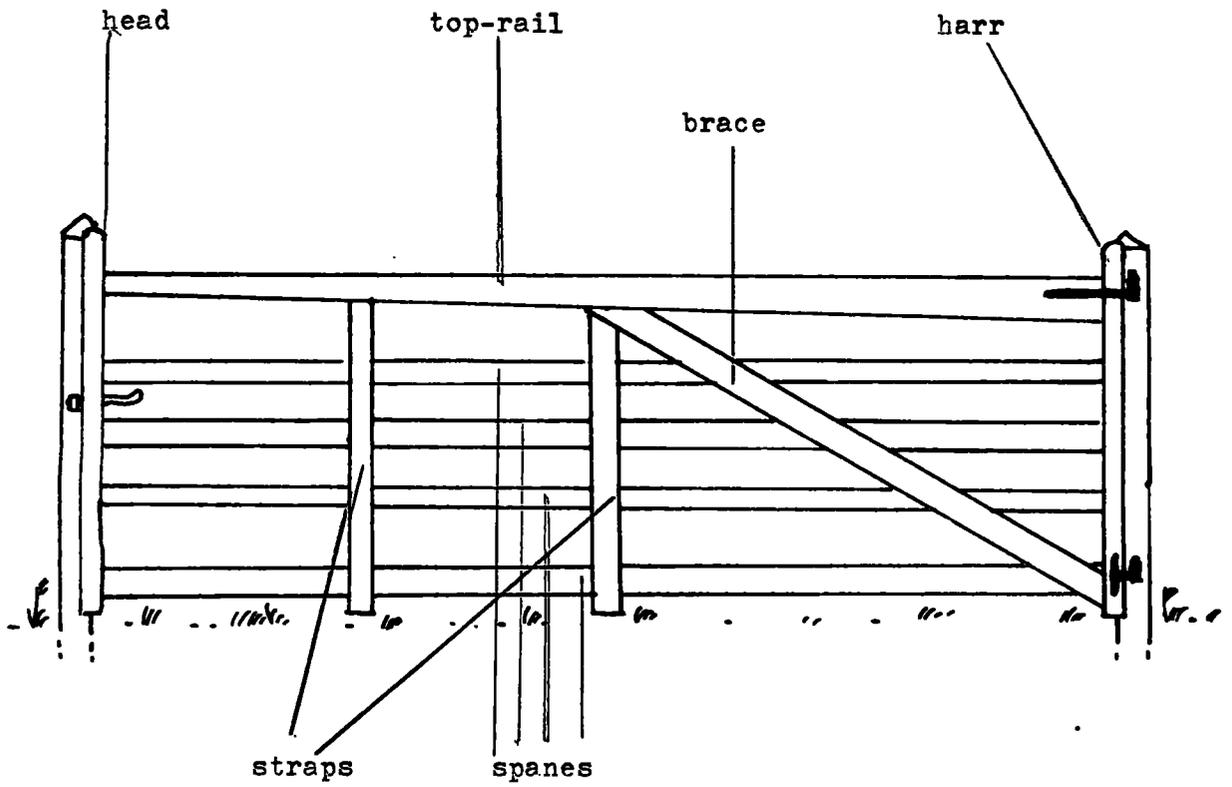


Fig. 18. The parts of a gate, after Morland.

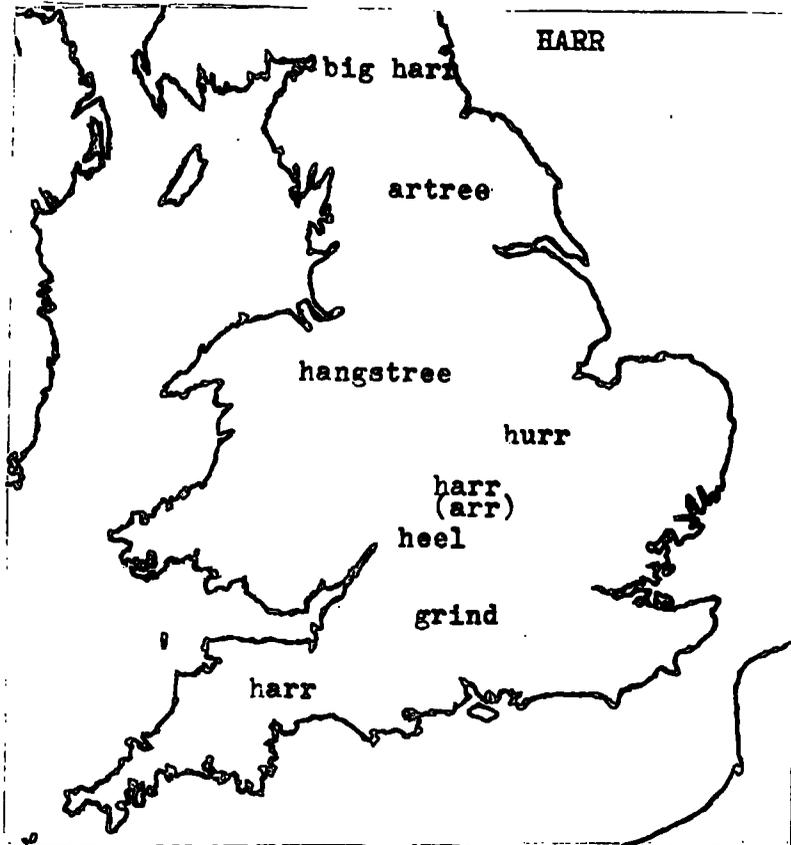


Fig. 19. Dialect terms for gate components, (a).

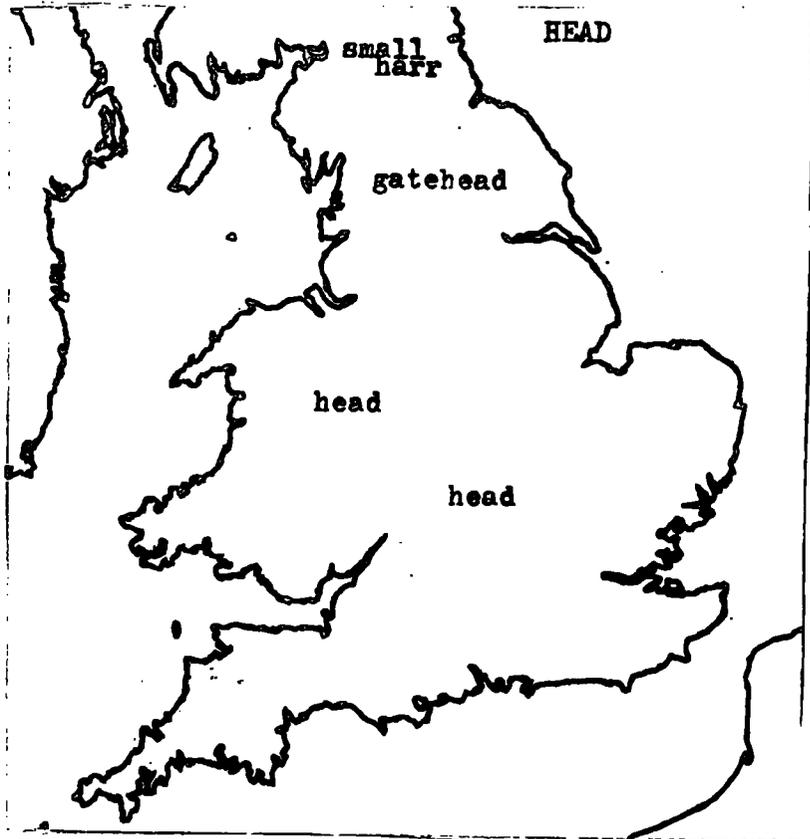


Fig. 20. Dialect terms for gate components, (b).

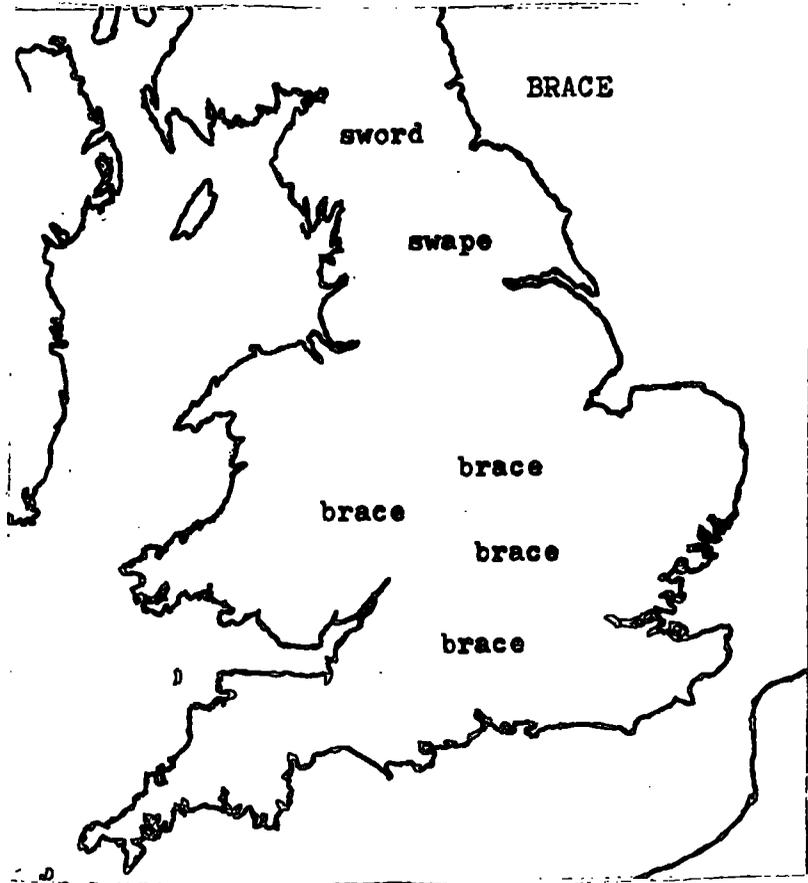


Fig. 21. Dialect terms for gate components, (c).

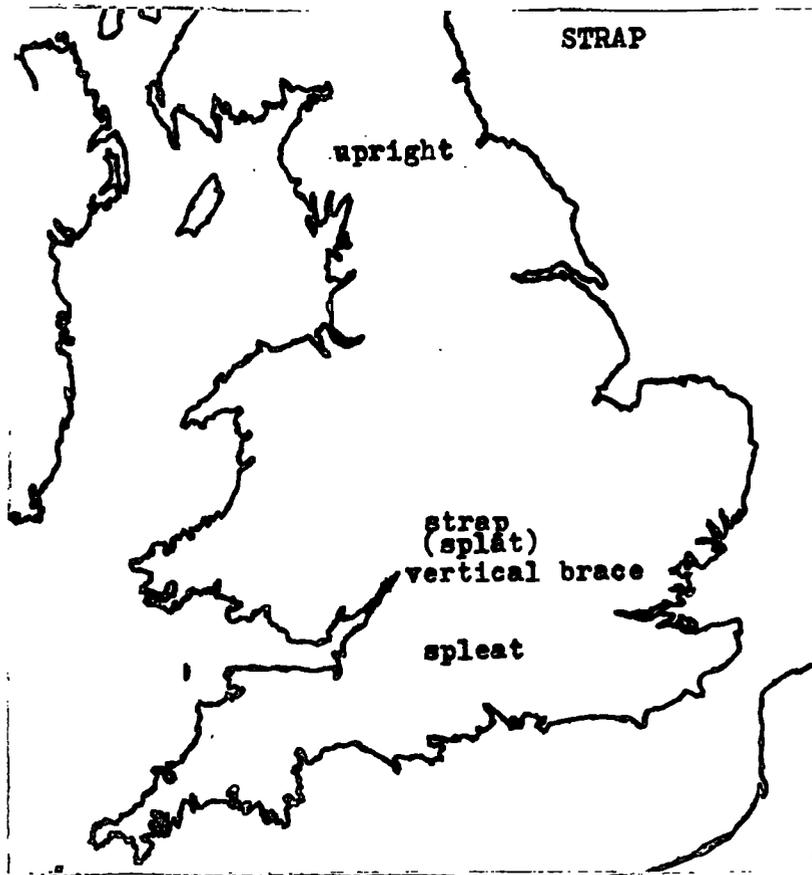


Fig. 22. Dialect terms for gate components, (d).

a secure method of joining is described:-

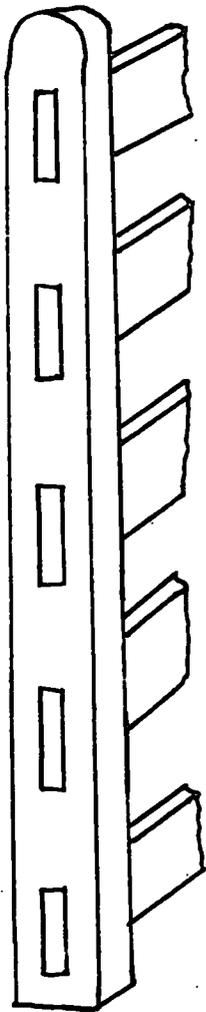
"(a) top rail to head and heel; mortised and tenoned right through and pegged; also the whole rail let in  $\frac{1}{4}$  in. ;  
 (d) under rails to head and heel; mortised and tenoned to  $1\frac{1}{2}$  in., except the second rail from the bottom which should pass right through, and be pegged; (See Fig. 23b).  
 (c) braces to top rail; housed or bolted with  $5/16$  in. bolts;  
 (d) braces to other rails; bolted with  $5/16$  in. bolts."

William Seymore (1964) states that in the north of England all mortises are carried right through the "head" and the "heel" instead of the more usual southern practice of just carrying two through - the top rail and the one above the bottom. This difference is shown in Fig. 23. I have noticed in Northumberland Durham and Yorkshire that many gates are made to the former pattern, while in south-east England and East Anglia it is rare to see more than two rails mortised right through the head or heel. Seymore points out, as do the Ministry authors, that the southern type is much stronger. I suspect it is the northern type that is the older form.

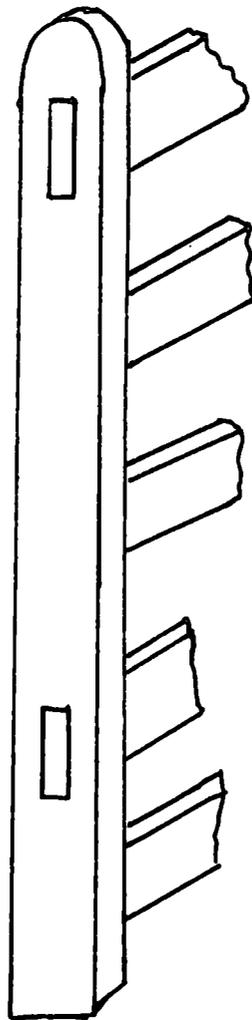
T.E. Morland (1962) investigating the locally made gates in Berkshire, found that the commonest joint was the mortise and stub-tenon, although sometimes a dovetail was used and in a few very crude examples the timbers are merely butted together and held in place with hoop iron. While dowels were formerly used to fasten the joints, bolts have replaced them on most modern gates.

W. Rose (1937) draws attention to another feature of certain field-gates:-

"In the old country workshops it was always the practice to cut the wider end of the underside of the top rail to thin lines and to work a rude ornament called "the jowl" to unite them."



a) North of England



b) South-east England

Fig. 23. Methods of gate-construction.

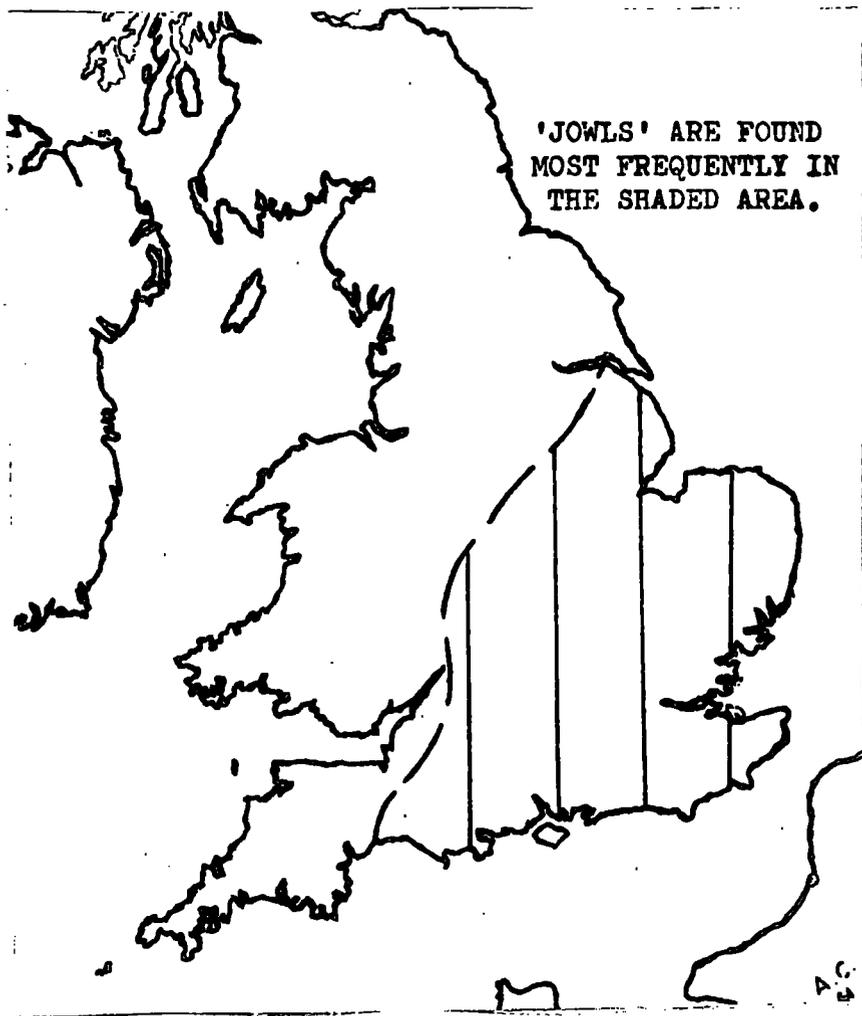


Fig. 24. Distribution of jowls on English gates.

This feature, looking a little like a gun-stock, was sometimes quite elaborate and was the craftsman's way of imparting some character to his gate.

Jowls are quite common on gates in the English Midlands, south-east England, East Anglia and parts of the west country (Fig. 24); they appear to be very much rarer in Wales, the north of England and Scotland. Some typical designs are shown in Fig. 25. Plate 17 shows a gate in Leicestershire with a fine jowl.

#### The Development of the Field-Gate.

Man must, from the earliest time have used some form of barrier to exclude prowling beasts from his home, whether it was a cave in a limestone cliff or a simple shelter. A "gate" as a barrier preventing stock from wandering indiscriminately over farmland could not, however, have existed until some form of agriculture had developed. A tree-trunk in many cases would prove efficacious in preventing the passage of cattle, and trunks may be seen in many parts of the world blocking the exit from some enclosure into which stock have been herded.\*

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\*Mather and Hart (1954) stated that grubbed up tree trunks were used for this purpose by the early settlers in North America. Many other objects, may of course, be used to provide a temporary obstacle across a gap in a hedge, fence or wall. A disused piece of farm machinery may be found preventing the escape of cattle on to the highway on many East Anglian farms, and T. E. Morland informs me (personal communication) that in Wiltshire a "hosier gate" is in common use this being "...an affair of barbed wire and sticks looped across a gap in the hedge." In Kent, a gate-hurdle is frequently seen blocking access to a field, particularly in sheep country. In Ireland one sees "phantom gates", gateways in dry-stone walls which have been temporarily blocked by building a crude barrier of stones across the gap, as in Fig. 26.

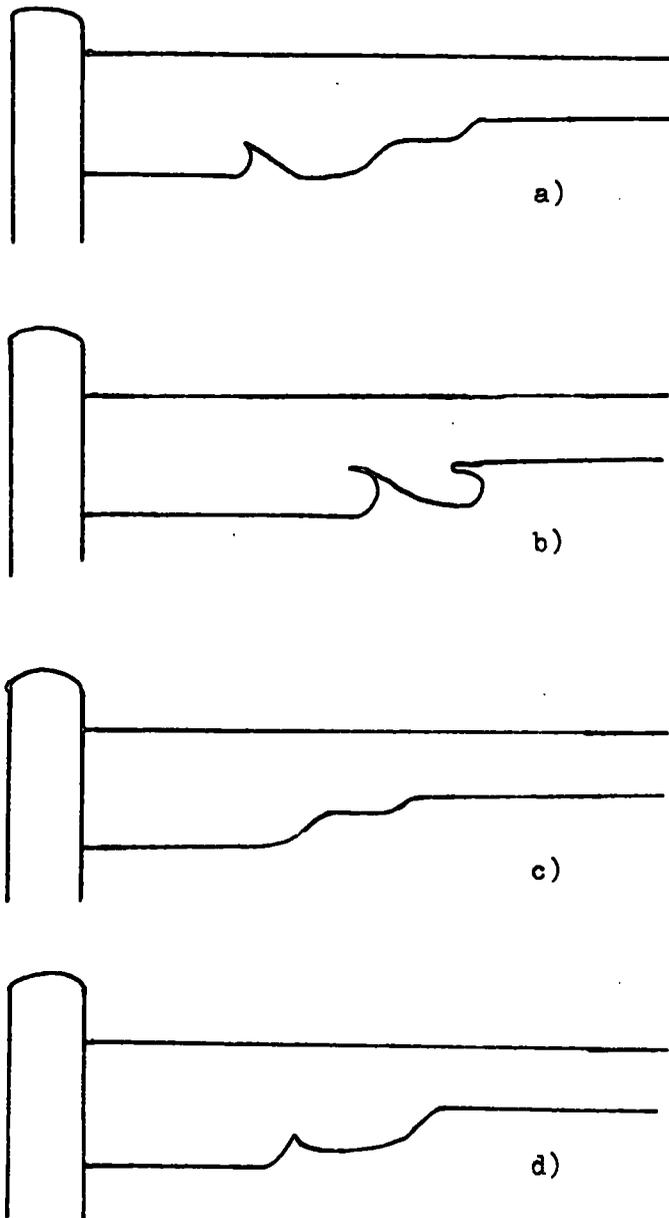
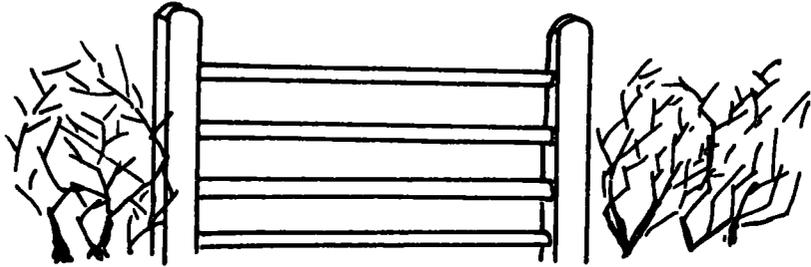


Fig. 25. Variation in the form of the "jowl".  
a) Dorset b) Nottinghamshire c) Cambridgeshire d) Norfolk.

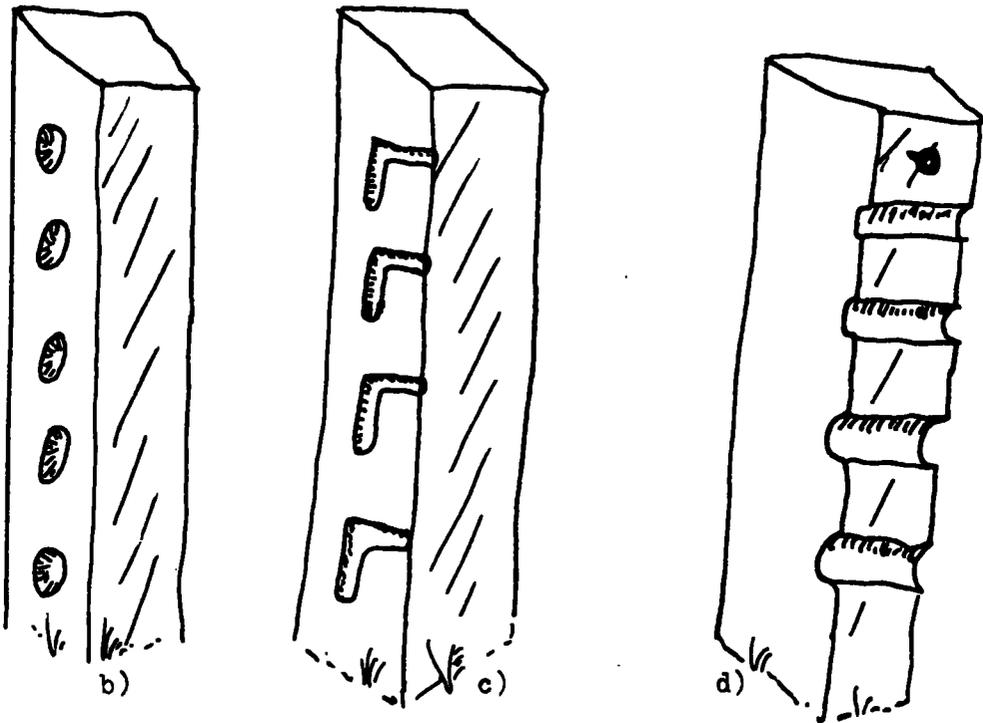
A logical development from the casual dragging of a nearby branch across an aperture in a fence or wall would be the selection and trimming of a log specifically for the purpose, perhaps with the construction of a socket to take the end of the bar on either or both sides of the opening that had to be closed. In many places in Asia and Africa cattle are herded into enclosures, either in the villages or away from the settlements, built of mud walls; a single break in the wall being closed by putting a stake across the opening, its ends secured in sockets cut in the mud-wall.

A refinement of the above, the single bar across an opening, is the setting of a number of separate bars, one above another, between two posts. This technique is unusual in Britain today, as other methods of closing a gap are so much superior, but wooden posts may be seen supporting two or three cross-spars in eastern England, and the slotted stone gate-posts constructed to hold the bars in place can still be found in a number of localities, sometimes converted to another use. They seem to be particularly common in Yorkshire and also in Devonshire and Dorset. R. Hanforth Worth (1953) describes four distinct types of "slip-bar" gates from the Dartmoor and much of the following is based on his account.

- a) Double Slot gates. Two upright granite posts about 6ft apart have vertical slots cut into them, the space between the slots being the same in both, although the slots in one post are twice as deep as those in the other; generally the slots are two inches in depth in one post and four inches deep in the other. Bars or poles 6ft. 4ins in length are then inserted in the deeper slots and pushed well home; the free end of the bar is then set opposite



a) Slip-bar gate with wooden posts in a hedge in Cambridgeshire.



Stone posts from slip-bar gates on Dartmoor:-

- b) Double-slot type.
- c) Slot-and-L type.
- d) Locked-bar type.

Fig. 26.

the shallow slot and pushed into it, being partly withdrawn from the deeper slot. The bar is then left resting on two inches at either end. A peg may then be put through the bar against the post that has the deeper slots to secure the bar in position. An example of a pair of posts of this type is to be found at Cudlipstow, Petertavy, Devon, although a gate of a more modern type has been attached, and I saw an example fashioned from the local limestone in the Isle of Purbeck. (Fig. 26b).

- b) Slot-and-L-gates. In this type one post is similar in every respect to the posts with the shallower slots in type a). On the other post, in the position corresponding to these slots, is cut a series of grooves, each one in the form of an inverted L, the horizontal arm of the L forming a notch in one face of the post. Usually the slots in one post and the grooves in the other are about  $1\frac{3}{4}$  ins deep. In gates of this type the length of the cross bar should equal the distance between the posts plus the depth of the groove and the slot; it is thus impossible to move the bar merely by end-wise movement. Hansford Worth refers to a gate of this type in North Creber, which at the time of his observations in the late 1940's was "complete in all respects". He gives another example of this type at South Creber and Lakeland, and says it was the most widespread type of slip-bar gate on Dartmoor. (Fig. 26c). It is also quite common in the Pennines of the West Riding of Yorkshire, e.g. near Meltham, (see Plate 18).

- c) Slot-and-Arc-gates. This is a rare type. One post is slotted in the usual way, while the other, instead of there being slots of even depth throughout, the upper end of the slot starts flush with the surface of the post, and then curves round cutting deeper and deeper into the post, reaching the bottom of the slot at a depth of about 2 ins. The posts slope very slightly outwards. The wooden bars are first pushed into the normal slots and then pressed into the curved slots of the other post. They are thus jammed firmly between the two posts. Examples are to be found opposite Northaway and at Poundsgate, both in the parish of Widecombe-in-the-moor.
- d) Locked-bar gates. This is by no means a common type, but is less rare than the Slot-and-Arc type described above. As in the other types, one post is an ordinary slotted vertical stone, the other is not slotted but rectangular depressions are cut out at a corner of one face of the stone, deep enough to take the whole thickness of the bars, and corresponding to the slots on the other post. The gate is mounted by placing one of each bar into a slot on the first post, and resting the other end in the depression cut into the second. The bars are fixed in position by a piece of wood set vertical over the ends of the bars as they lie in the recess, and secured in position with an iron eye set into the granite near the top of the post, (Fig. 26d); Hansford Worth mentions examples of this type at Cudlipstow, Petertavy and near Puggiestone, Chagford.

This same author has some interesting remarks about the distribution and dating of the slip-bar gates on Dartmoor.

He says that they are most frequent on the east of Dartmoor, around Chagford, between the town itself and westwards towards

the unenclosed moorland; they are also common to the west and south in the parishes of Widecombe, Monaton, North Bogey and Moretonhampstead. In the Dart valley however, they are less frequent and scarcer still, though not absent, in the parishes of Sheepstor, Walkhampton, Marytavy, Plympton and South Brent. He also refers to a Cornish variant, in which the posts are made of slate and the slots carried right through the post, and mentions a very few wooden posts similar in form to the granite posts described above. (I have seen similar posts made of Purbeck limestone in the Isle of Purbeck.)

The width of these slip-bar gates when the two uprights were in their original position was about 6 feet, and sometimes less and therefore practically impossible to negotiate with a wheeled vehicle. The introduction of the cart to replace pack-horses and simple sledges seems to have taken place in this part of England between 1790 and 1805.. All the slotted stones of Dartmoor are shaped by cleavage, not by drilling, a technique that was introduced to the moor about 1803. On the basis of these two pieces of evidence Hansford Worth suggests that few of the slotted stones of Dartmoor could have been made since 1800, and that most are very much older.

A. Richardson (1961) describes what appears to be slip-bar gates of the Slot-and-L type from the North Riding of Yorkshire: "In the moorland area south of the River Esk there are many (gate-posts) cared with deep grooves in the shape of a downward facing letter L; other posts often opposite, have deep, cup-shaped holes."

He continues by suggesting that when the gates were in use, with bars between the posts, one or more of the bottommost bars might have been removed to allow sheep to pass through,

or at the top for a man to stride over. For larger animals of course, all the bars must have been removed to allow movement. Richardson comments farther that today many of these old gate-posts could be seen built into walls or adapted to take hinged gates. He indicates that they are quite common at Denby and Eyton Bridge but says he has never found a gate-post of this type to the north of the Esk "although stone gate-posts are plentiful there."

This author does not attempt to date these gate-posts with the same degree of precision as Hansford Worth aspired to with the Dartmoor examples, and merely states that he believes them to be "the earliest gates used when the fields were enclosed."

I think that slot-bar gates must have been a common type in parts of the upland areas of England in the sixteenth and seventeenth centuries, and that a thorough search would bring to light many more examples.

The constant removal and replacement of the separate bars of a slip-bar gate or the heaving to and fro of some more primitive barrier must have been irksome to a busy farmer, particularly as sophisticated wheeled vehicles, particularly farm waggons in England, replaced more primitive sledges, truckles, carts and pack-animals. In many places too, it would be an advantage to have a gate that could be opened and closed by someone on horseback, without having to dismount, tether the animal, take down the bars, lead the horse through, replace the bars, and remount. Particularly then, where it was important that the gate should be kept closed, at sites such as the entrances to farm-yards, a real gate, with a firm wooden frame would have many advantages.

The Rev. S. Rowe (1848) writes as follows:-

" The primitive contrivance for hanging gates of the moorland crofts and commons, may be seen in this neighbourhood (Chagford, Devon). No iron hinge of any kind, or gate-post is employed. An oblong moor-stone block, in which a socket is drilled, is built into a wall, from which it projects sufficiently to take the back stanchion of a gate, while a corresponding hole is drilled in a stone sunk in the ground. The gate then swings freely.."

Rowe goes on to marvel at the ingenuity of the rural engineer who makes these gates without any iron, depending entirely on local natural materials. Hansford Worth, in his mention of this type of gate, says that these "wood-and-stone" gates almost invariably have an iron pin at the base of the upright or "harr" on which the gate pivots, and these wear holes in the socket stones. (Plates 19, 20) Rowe, was writing a century before Hansforth Worth, and almost certainly the iron pin represents a later development. Large slabs of stone pierced either by large sockets for the top of the swinging harr, or small ones worn by the iron pins in the bases are quite commonly found in the west country. Frequently a single stone may have holes of both types if it was used first for one purpose and then the other. Hansforth Worth describes these stones from many places on Dartmoor, from Cornwall and the Scilly Isles, and states that this method of hanging gates is found as far afield as China. T.E. Morland (Personal Communication) has mentioned that an analogous type appears in Sweden, where, however, a hook of juniper wood takes the place of the top pivot-stone, as one might expect in a forested area. I have also seen photographs taken in Spain of the same hanging mechanism. E. Estyn Evans (1957) describing this method of hanging gates as it occurs in Ireland states:-

"Harr hanging.... is also found in Scotland, the Lake District Cornwall and Brittany and has survived in these stony refuge corners of Europe. The gate swings like a fire-crane, directly on its heel, on a projecting iron spud which swivels in a stone socket. These stone sockets are frequently seen around old farm sites and very similar stones in Mesopotamia go back to the fifth millenium B.C. In the days before the iron gate was introduced\* wooden gates were hung in the same way, and we know from Scotland that they were sometimes tipped with stone."

We have therefore, a striking example of a cultural trait of great antiquity which now survives only in "the stony refuge corners of Europe" such as those of the "Atlantic Fringe."

A variant from the typical form of the "wood-and-stone" gate as it is described above appears in Yorkshire and Derbyshire;

A. Richardson (1961) writes:-

"In the north-east of Yorkshire, the slotted gate-posts (i.e. those of the slip-bar gates) were succeeded by a later type with a single hole in the top. A chain passed through this and around the harr of the gate... The harr itself extended to the ground where is pivoted in a cup of flat stone."

These holes are generally square in shape, each edge being about 4 in.in length. I have seen many in the Pennines of the West Riding (i.e. near Bolton Abbey) and the Peak District of Derbyshire (e.g. around Edale and Castleton).

This form might conceivably represent an evolutionary stage derived from that previously described or it might be a local variant - it might be thought of as a 'parallel' form if the analogy of organic evolution be carried further. Certainly I know of no area where both types appear together.

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\*Iron gates have been almost universal in Ireland since the clearing of the forests in the eighteenth and nineteenth centuries. See page 85.

The appearance of iron pins on the bases of the pivoting harrs of the later examples of the wood-and-stone gates mentioned above is but a single example of a widespread trend. As metals became cheaper and more abundant, iron hinges were employed on an increasingly wide scale, as the very much greater convenience of gates hung with this type of hinge far outweighed the trivial additional expense.

Arthur Raistrick (1946) wrote of Yorkshire gates:-

"The commonest method of hanging is to have a large post of gritstone on each side of the opening, and on the hinge side to hang the gate with one 'creak' or hook near the top of the post, and let the foot of the gate, armed with a wrought iron stirrup or peg, rest on a socket stone set in the ground."

In this way the gate is balanced so that it will open easily, but if released before being fully opened it will spring back to the closed position. This method of hanging gates is only occasionally found in the Yorkshire Dales today, but the abandoned socket stones or spud-stones are frequently seen, and probably a large number could be found a few inches below the surface of the soil.

E. Estyn Evans (1957) mentions gates being hung in the same way - one iron hinge at the top of the harr and a spud-stone at the base - in many parts of Ireland and I noticed a gate hung by this method in Co. Antrim in 1964.

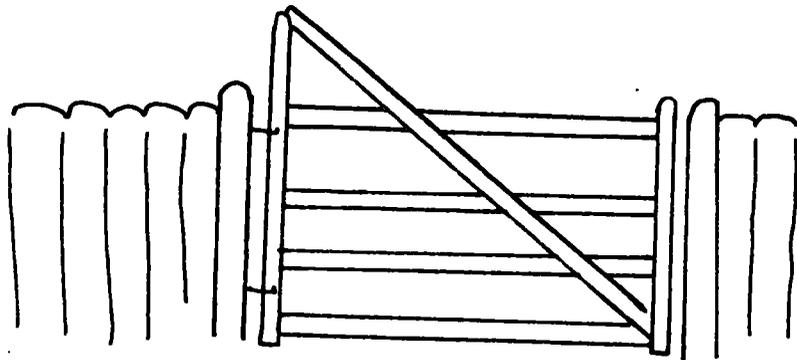
In the wood-and-stone gates described above, the pivoting harr would obviously have to extend considerably above the top-rail, and generally a diagonal brace would link the upper part of the harr to the opposite lower corner, to make for added strength, as in Fig. 27a and Plate 21. When harr-hanging was displaced by the more modern hanging mechanism, the need for the long harr disappeared. It seems, however, to have been retained and a

number of prints engraved in the 17th, 18th and early 19th centuries depicting scenes in several parts of England show gates with long harrs although they are hung from iron hinges lower down (See Fig. 28). Gates of similar design can still be seen in the west of England and very occasionally elsewhere. It occurs widely in the U.S.A. presumably having been introduced by the settlers that left this country while it was still widespread (Plate 23).

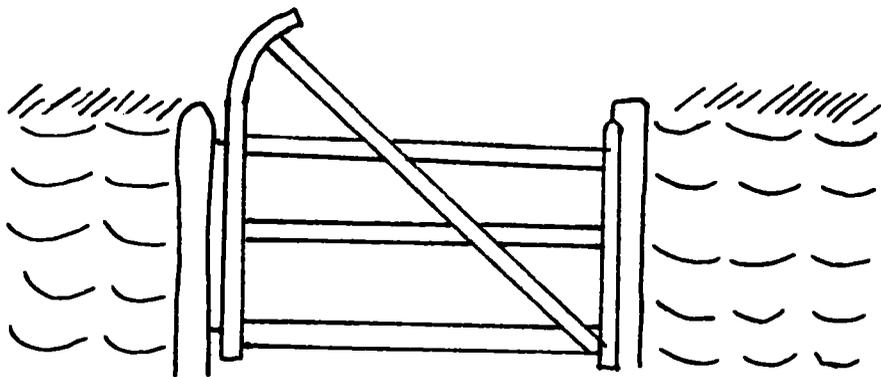
This type of design does place considerable strain on the joint uniting the harr to the long diagonal. The strain is much reduced if a curved harr is used so that the two timbers join at  $90^{\circ}$  (Fig. 27b). This would seem a logical development from the former type and it too is represented in some early illustrations such as that in Fig. 28b, and the design survives today in the field-gates of a very few localities in the west of England;\* it is however, widely used for ornamental gates to driveways, although quite unnecessary with modern techniques and materials. Some gates will even be found across the driveways to suburban houses that have elaborate curved harrs which although possibly ornamental are completely functionless, without any diagonal spars. (See Fig. 27c). Similar excessences can be seen on wrought-iron gates where they are even more of an appendix, and in some instances the curve-over of the harr and the diagonal have been abbreviated to a semi-circular loop, as in Fig. 27g and h. Thus what was formerly an important structural feature of the rural field-gate has now reached the status of a suburban fetish! (See Plates 24 - 27).

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\*For an account of the distribution of gates with curved harrs see page 79.



a) A 17th century design from the frontispiece of 'Systema Agriculturae' by John Worlidge.



b) A gate from the frontispiece of 'New Additions to the Epitome of the Art of Husbandry,' by Joseph Blagrave, published in 1669.

Fig. 28.

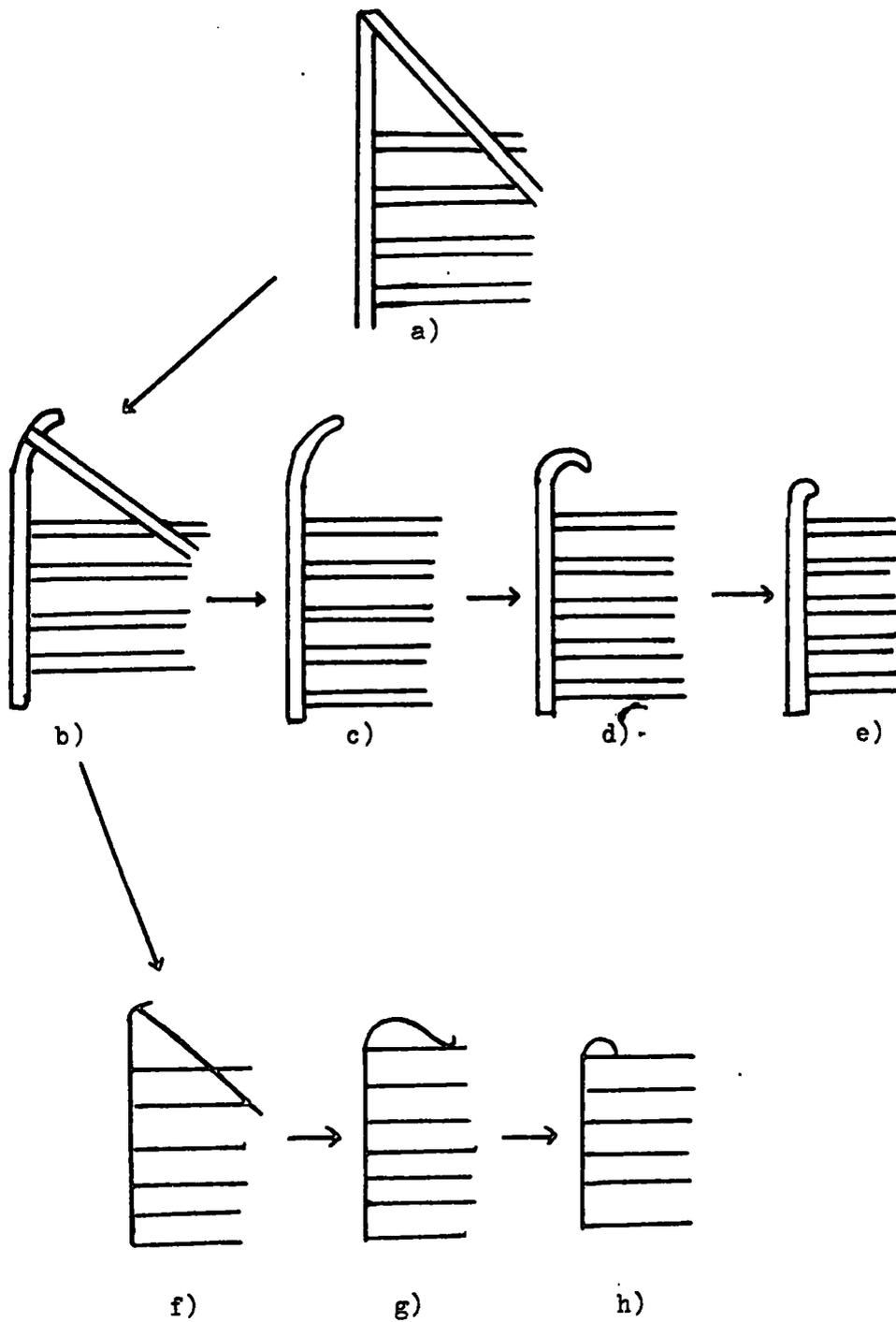


Fig. 27. Evolution of gate-harrows; for full explanation see text. °

It will be noted that little attempt has been made to give dates for the abandonment of one type of gate in favour of another. This is partly because of the lack of relevant information, and partly because this type of transition is never abrupt, one type taking a number of years to displace another from an area. Frequently the remains of several successive types may, as I have indicated, be found together in quite a small region. In Britain, to which my observations in this section have mainly been confined, innovations in agriculture, at any rate in historic times have sprung from East Anglia, the Midlands and the south-east and spread but slowly to the north and west. It is therefore to the "Mountainy districts" of upland Britain that we must go to find some of these more ancient designs.

Increasingly, these rather more primitive and picturesque gate types are being replaced by modern mass-produced designs. One recent innovation is the use of tubular steel or aluminium in the manufacture of gates; these are obviously more efficient on the modern mechanised farm, and require very much less in the way of maintenance than the more traditional types, but have little of their rural charm.

#### Regional Types - England, Scotland and Wales.

Some of the problems associated with the study of regional variations in gate types have already been enumerated; another is the quite astonishing variety that may be met with in a very small area. None the less quite pronounced regional differences in terms of the typical number of bars (i.e. the top rail + the spanes), the arrangement of the braces or straps and the form of the harr may be seen.

Fig. 29 shows the distribution of the writer's own record of a gate type generally with 5 but occasionally with 4 or 6 bars and with a single brace. Although it does occur in the south of the country it is predominately a northern form, (c.f. Plate 28).

Fig. 30 shows another northern type with a basically similar, though more limited distribution. Here the number of horizontal bars and vertical braces is subject to quite wide variation. There are generally at least 5 and sometimes 6 or even 7 horizontal members, and vertical straps (i. e. excluding the head and the harr) vary from 1 to 3. It might be argued that this particular design, especially when the straps extend beneath the bottom spane as they very frequently do, is particularly well suited to sheep country, as only the smallest lamb could wriggle through. It is however, absent from both the contemporary and historic sheep-rearing areas in the south and east of England.

The distribution of the "peaked" type in Fig. 31 may also have a connection with the distribution of sheep-farming. It will be seen that it appears particularly in the west-country, southern Scotland and the north of England, all important sheep districts. As its basic construction is similar to that of a gate-hurdle (J. Geraint Jenkins (1958)), this might be a clue to its derivation. Certainly one frequently finds hurdles used temporarily to block a gate-way.

It is however a very simple design, almost the simplest that can be devised that will remain reasonably rigid, ( the diagonal braces are essential for this) and it uses a minimum of wood; it may well be a rather primitive type that has been displaced from the eastern and lowland regions. (see Plate 29).

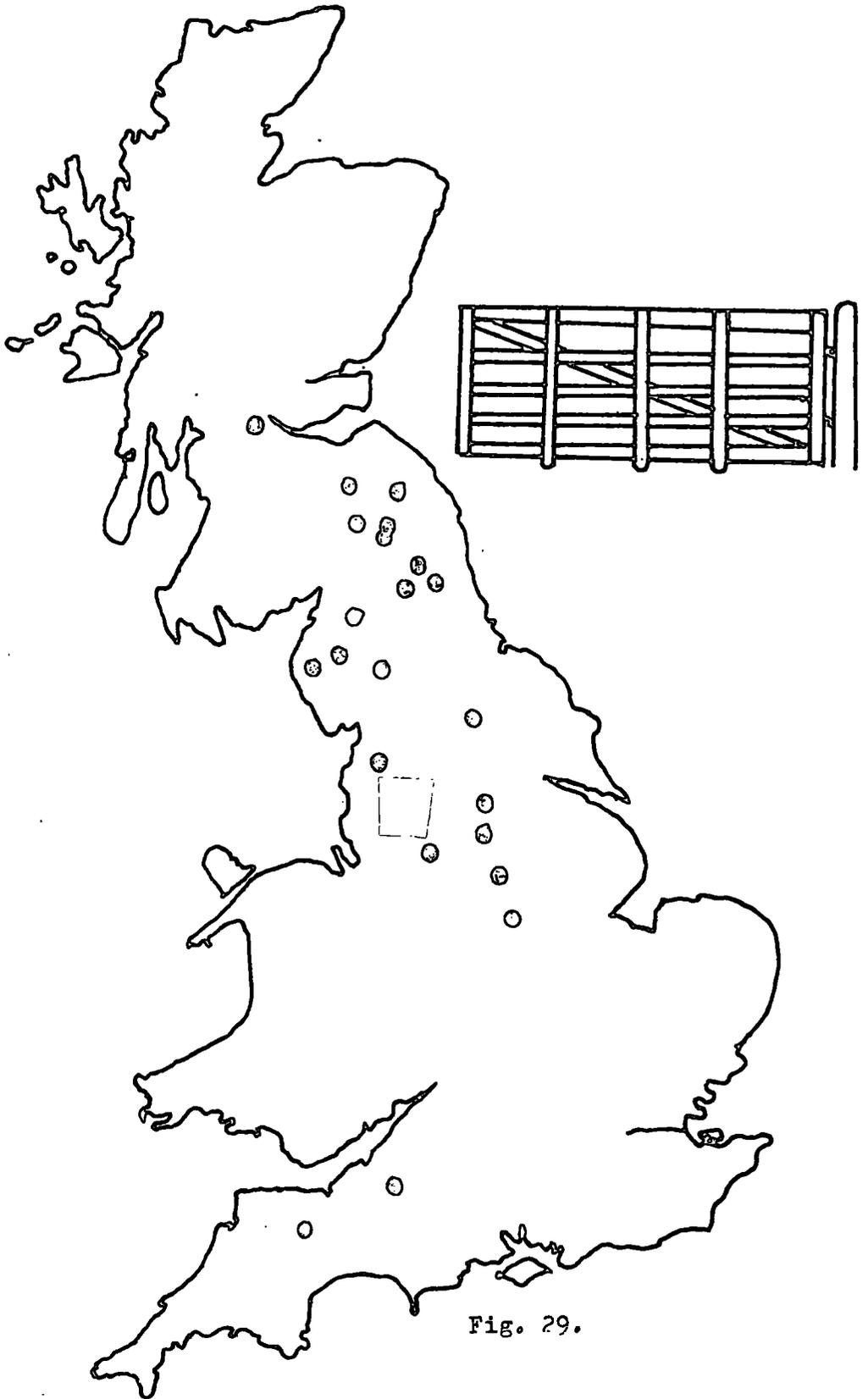
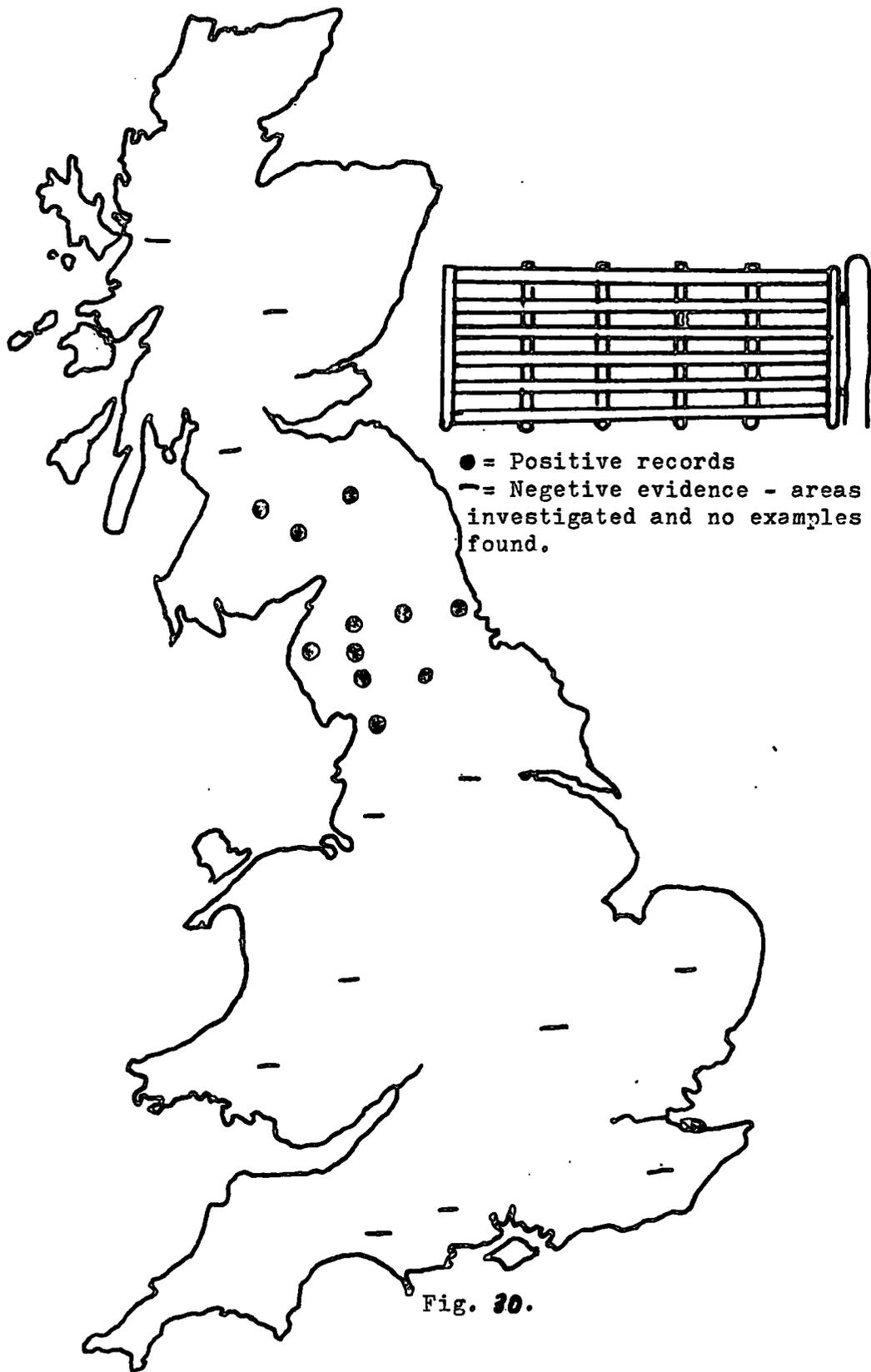


Fig. 29.



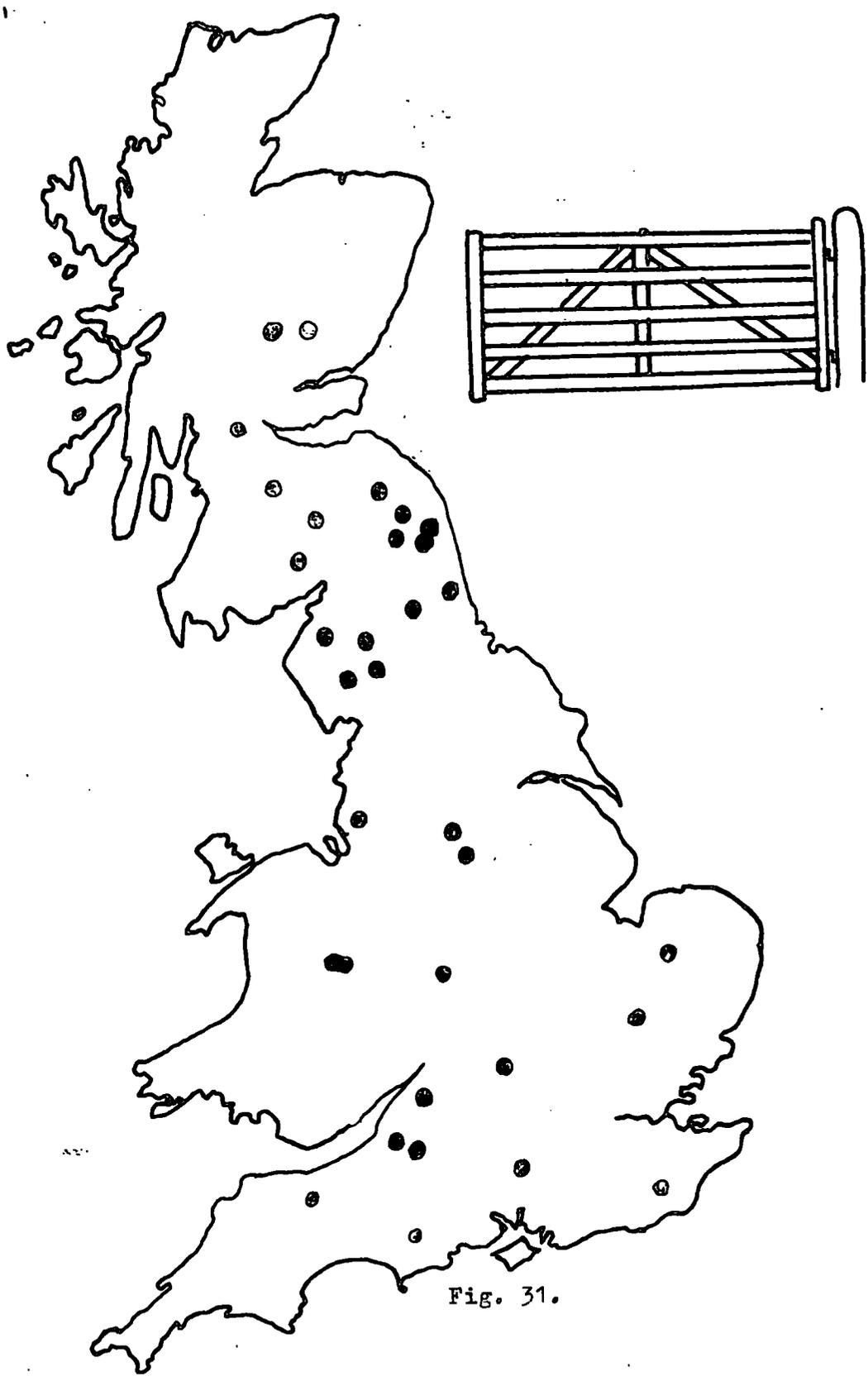


Fig. 31.

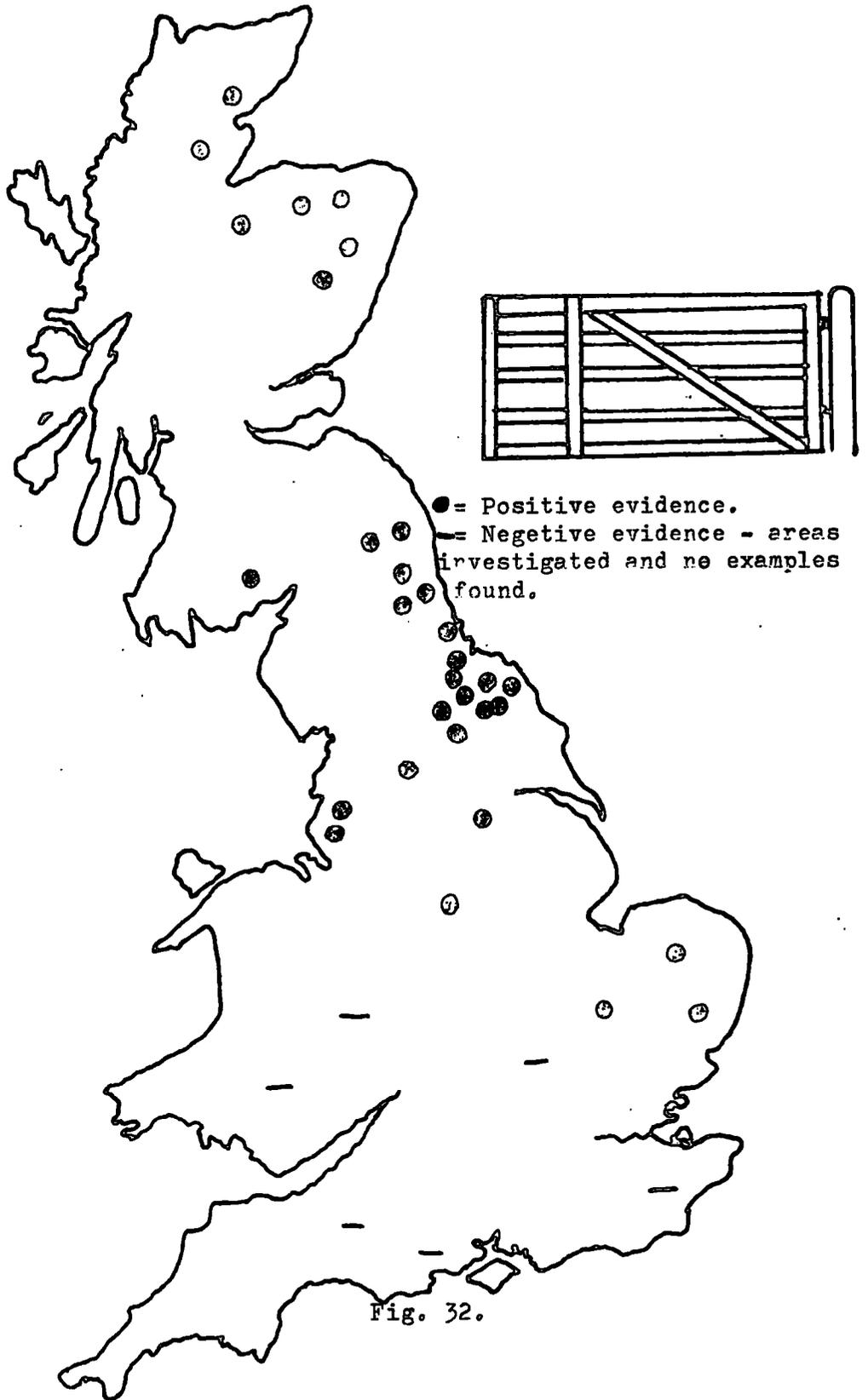


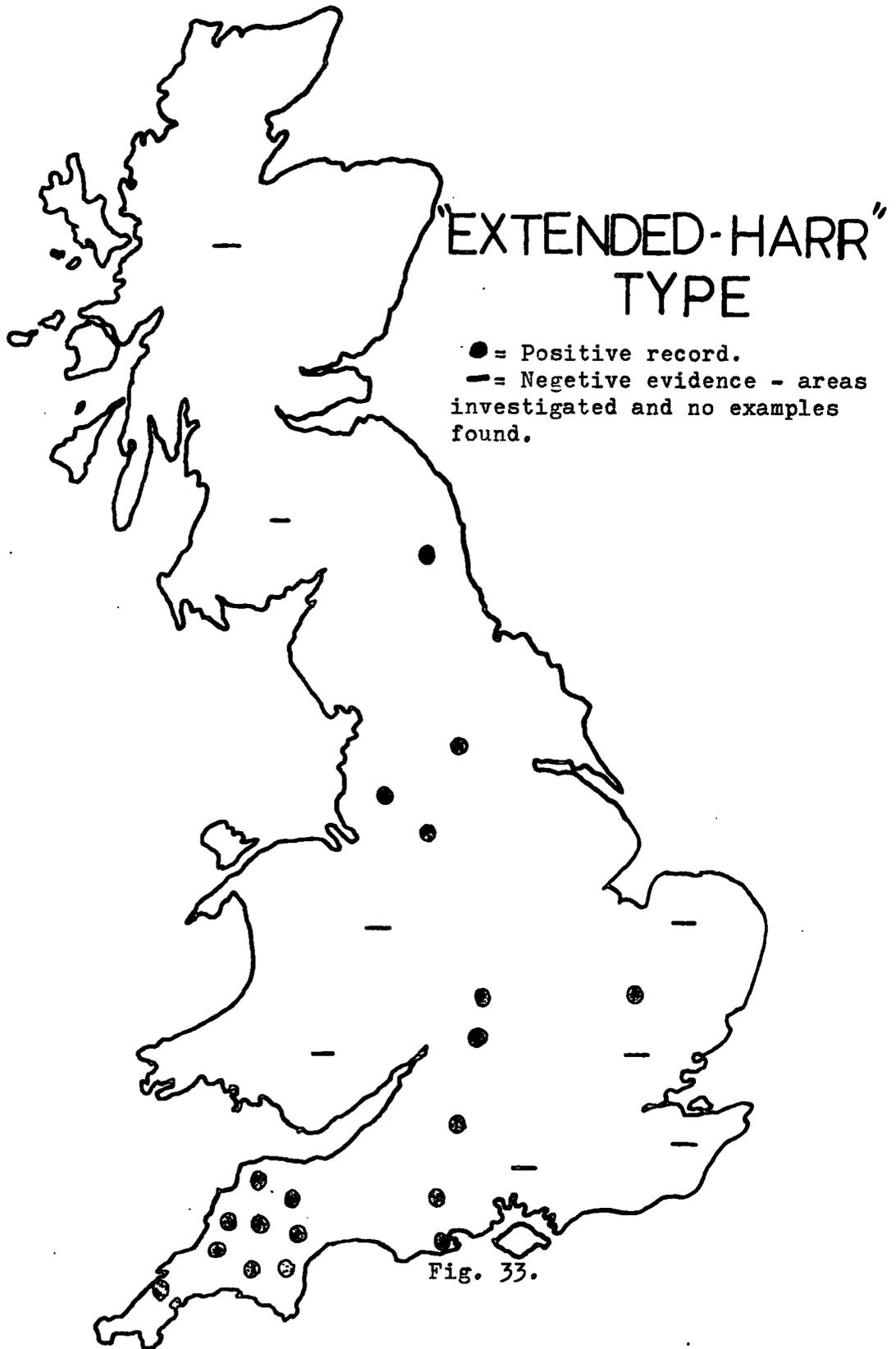
Fig. 32.

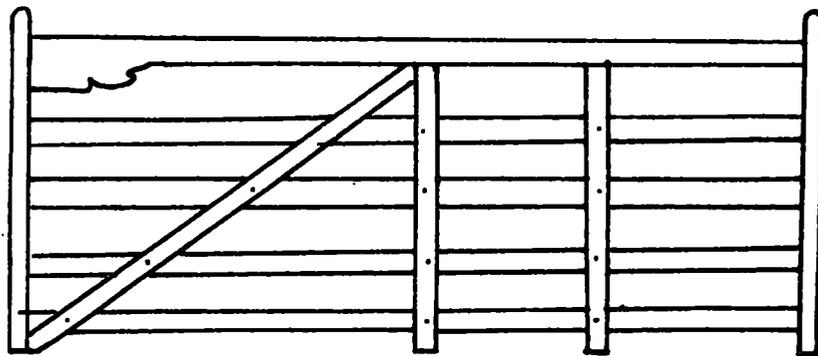
The "extended-harr" gates mentioned earlier are also interesting in this respect; these are almost certainly another primitive type, and may be seen in old prints, of many areas, including the south-east of England, and now apart from isolated exceptions may be seen only in the west and north of the country, (See Fig. 33).

Figure 34 shows some typical gate-types found in the south-eastern counties. The Kentish type or "heave-gate" is particularly interesting. It does not swing from one gate-post, attached to it by means of hinges, and "clapping" against the other as is usual, but the topmost and bottommost horizontal bars are longer than the others, and fit into sockets in the posts, rather in the way that the bars of a slip-bar gate fit into their stone sockets. These gates are made from split branches as are the gate-hurdles that are made nearby, and frequently used for penning sheel in Kent and Sussex, and I have no doubt that this type is a simple development of the gate-hurdle.

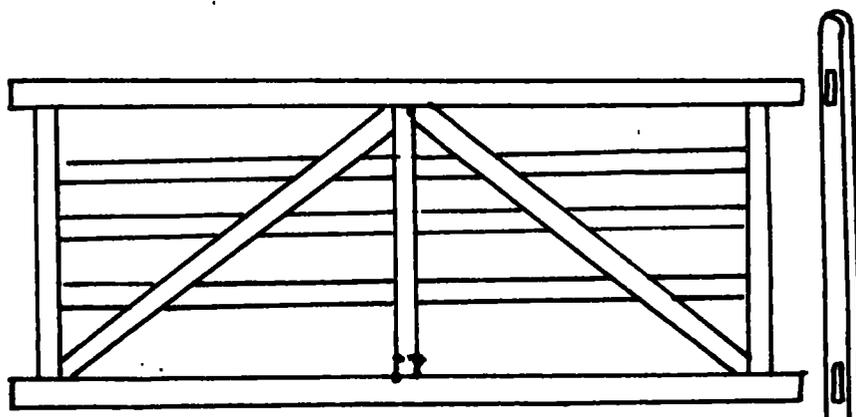
Figure 34a is a very common type in the south-east; it is liable to considerable local variation, however; for example Morland (1962) states that while 3 straps is usual in Hampshire, Berkshire gates generally have 2. It would appear to be a long established design in the region; the picture in Plate 30 was painted 150 years ago, plates 31 and 32 are recently taken photographs.

Other types have an even more local distribution; Figure 35 shows some of these; c) appears only in Pembrokeshire, oddly enough usually painted red or pink, b) is found in the Lake District and only occasionally elsewhere, and a) is a Cornish type.

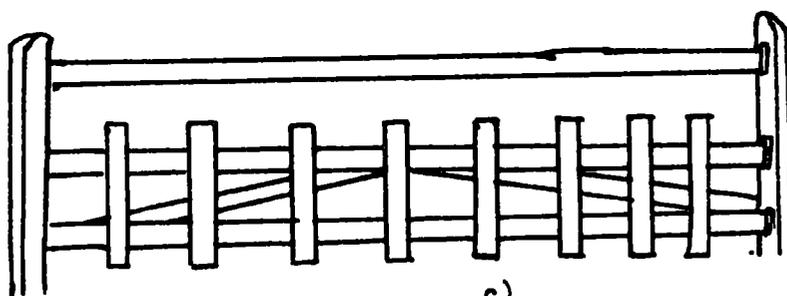




a)

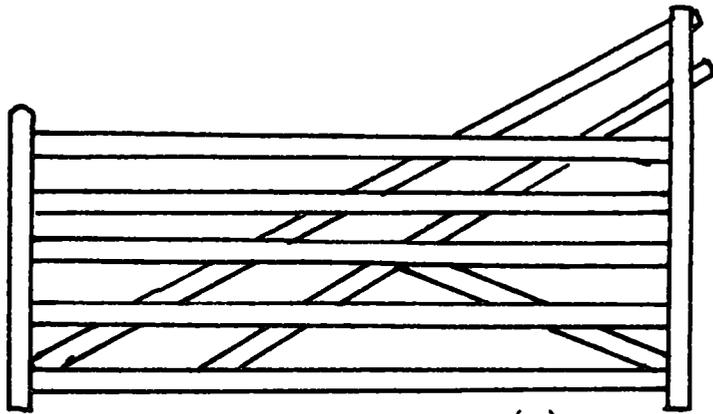


b)

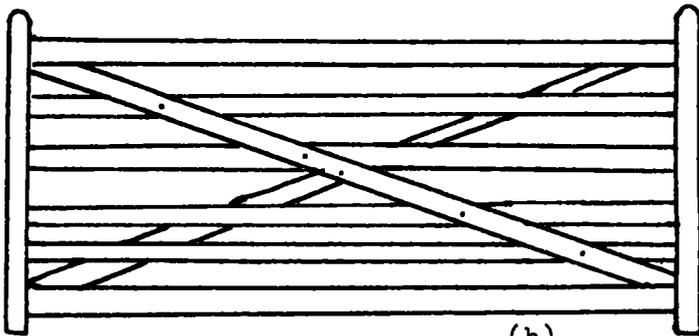


c)

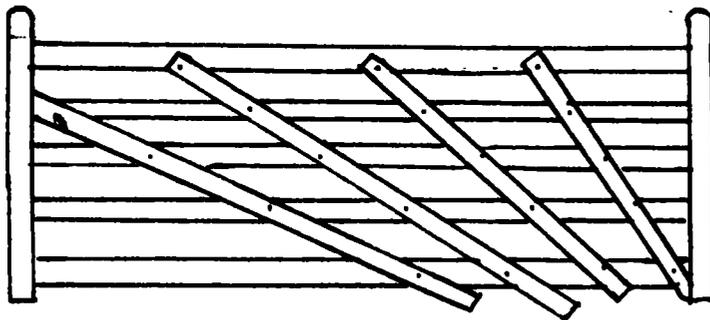
Fig. 34. Some gate-patterns from south-east England:-  
 a) Common wooden five-barred gate with "jowl".  
 b) and c) Heave-gates from Kent and Sussex



(a)



(b)



(c)

Fig. 35. Some local gate types:- a) Cornwall  
b) Lake District  
c) S.W. Wales

In the Mendip hills and the surrounding areas of Somerset. many old gates may be found with an enormously thickened harr, with a step on which the top-rail rests. T.E. Morland states that at one time this type was universal in an area extending from the Mendips to the Wiltshire border, (Plate 33).

The occurrence of curved harrs on gates has already been discussed in some detail; although they are found on elaborate ornamental gates, such as those at the entrances to driveways and so on, it is unusual to find them now in more general use. There is however a small area around Brockenhurst in the New Forest in Hampshire where curved-harr gates are to be found. The Plate used as a frontispiece in R. Hansford Worth's book on "Dartmoor" (op. cit. 1953) shows a gate of this type, apparently in open country at Snap Lane, Willsworthy. Here we have yet another example of somewhat restricted and probably decreasing distribution of a primitive design.

Two types occur widely in south Dorset; they are rather similar to one another, consisting of a frame of wood held together with pieces of hoop-iron, with a series of iron bars either as cross pieces or as verticals, (See Plate 34). I suspect that these are "estate" patterns, see page 83.

Figure 36 shows a very different type of distribution; the XX or "diamond" pattern is very widely distributed particularly in eastern and southern counties. It is a very efficient and structurally firm design and for this reason is the design adopted by many firms specialising in the manufacture of farm-gates by mass-production techniques. Many gates of this type are made using steel bolts instead of the "mortice and stub tendon" and dowelling of older structures. It is also quite usual to find the maker's name

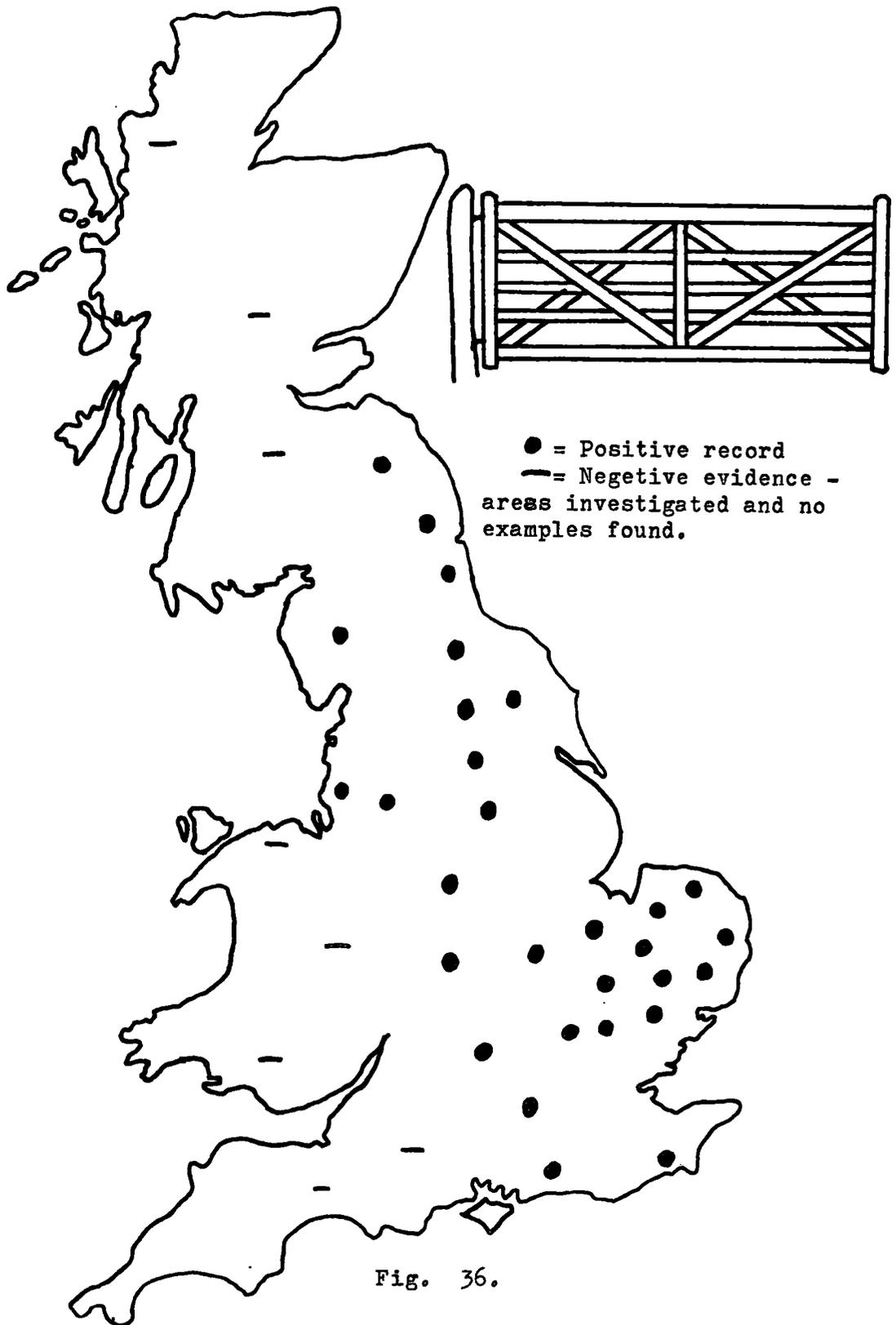
stencilled on the harr or top-rail. While many of the traditional designs of the north and west have shrinking distributions, this type seems to be extending its range. See Plate 35.

In some places, particularly in The Vale of the White Horse, the east Midlands and the Weald, double gates are met with, (Plate 36 ). As noted above the number of bars that a gate possesses varies; 5 is a typical number, but 6 was formerly usual in parts of east Anglia and the Midlands, and mention has already been made of patterns with this number and even more in sheep country in Yorkshire and Derbyshire.

In Northumberland and Scotland I have noticed that lowland fields generally had gates with 5 or 6 horizontal bars, while on upland farms 4 or even 3 was usual. Perhaps less wood was available on the hills or maybe the incomes of the farmers working on the upland marginal land did not allow them the luxury of a well-hung gate.

Gate "furnishings" vary from place to place in a similar way. Although recently hung gates will be equipped with efficient hinges and fastenings made by engineering firms, some older gates can still be met with bearing the work of a local blacksmith or carpenter.

Thus a simple wooden latch is the usual gate fastening in the Cotswolds, (Plate 37 ) while in Leicestershire a locally made metal bolt is used. In parts of Sussex a spindle-shaped plumb-bob attached to a chain is passed through an eye on the gate-posts, and around Jedburgh and Coldstream in the south of Scotland a chain is coiled around the head of the gate and the post in an unusual way.



Morland suggested that where fastenings varied locally, it might be found that they varied from one hunt to another. Obviously it would be an advantage if all the gate fastenings encountered in the course of a days hunting were standardised.

Gate-posts may also convey information about local conditions to the observant enquirer - the slotted posts of slip-bar gates as indicators of the former mode of transport have already been described on page 71. Often the local stone is used; posts will be cut from granite in Aberdeenshire and Devonshire, and Millstone grit in Derbyshire and parts of Yorkshire. In Westmorland Penrith Sandstone is used; while in parts of north Norfolk, a county poor in building-stones, the local Carrstone, a Cretaceous sandstone may be built into walls and gate-posts. Typically these Norfolk Carrstone posts resemble rounded turrets, similar to the gate-posts found in parts of Ireland (see below) and are constructed by "corbelling" as the small fragments into which this stone breaks do not take well to more conventional building techniques. (See Plate 39). In the Fens of eastern England, gate posts are frequently made from masses of "bog oak" pulled from the peat.

Very often the gate-posts found on either side of the gate will be found to be different; one may be an ancient one built from the local stone, the other being a very much more recent concrete erection. Usually the explanation of this is that one of the original posts was removed to enable modern heavy equipment, such as combine harvesters to pass through.

Enough detail has now been given to show how striking is the variation throughout England, Wales and Scotland. A full discussion of the various factors influencing the distributions of the various

features with which this study is concerned will be given later, but it might be helpful at this stage to give some explanation of the variations.

In some instances a particular form may be correlated with a particular element in the physical environment, the use of local stone in the gate-posts, and the use of less wood in upland areas are obvious examples of this. Sometimes there may be a relationship to the type of husbandry of the area - the similarity of certain designs to those of sheep hurdles has been mentioned, or with traditional forms of transport (N.B. the abandonment of slip-bar gates when the horse-drawn wagon replaced the pack-horse and sledge, as described on page 71.).

It has also been shown that the distributions of types of field-gates are dynamic and changing; many of the older designs, that were formerly widespread and may be seen in old pictures of many areas are now restricted to small pockets particularly in the north and west of Britain, while more modern designs seem to be extending over the country from the south and east.

Gates being heavy pieces of equipment would be unlikely to be transported far in the countryside of eighty or a hundred years ago; when a farmer needed one he would make it himself, instruct one of his men to construct it or perhaps get the village carpenter to do the job for him. In any event the craftsman responsible would be used to such work and the way in which it would be done would be rigidly determined by convention, just as the techniques of the cooper, wheelwright and blacksmith are traditional and have not changed appreciably for generations. However, in the relative isolation of a rural society one would expect local peculiarities to emerge and this would explain some of the regional variation, and frequently no doubt, a craftsman would put a "signature" to his work,

perhaps in the way he carved his jowls, (see page 65).

Occasionally an adventurous craftsman would flout convention and produce altogether a new design. There is an interesting example of the influence of a single man on the gates of a region in Sussex. John Tapsell was an eighteenth century carpenter in the village of Mountfield in east Sussex, who earned himself a name locally for the design and production of a gate that revolved round a central pivot. These "Tapsell gates" as they came to be called, were once common in this Part of Sussex, but now only six remain:- at Pyecombe, Eastdean, Jevington, Kingston-by-Lewes, Coombe, near Lancing and Friston. Of these that at Pyecombe is a modern replacement and that at Jevington was restored in the 1930's. The writer's photograph (plate 40) is of the one in the churchyard at Eastdean.

Many of the larger estates even today possess their own workshop where gates are made for sale to other local farmers as well as for use on the property itself. The influence of an estate workshop may thus extend over quite a large area. For example Dartington Hall Estate Forestry Department has been responsible for providing a very large number of gates in South Devon.\* Again, my relatives, Mr. and Mrs. Loxton of Wyke Farm, Sherborne in Dorset write of the Digby estates in that area:-

"Digby estates have had their gates made by their own craftsmen and have always put an extra piece of wood (the Jowl) by the hinge to portray a gun stock to show it belongs to the estate, which is still very large. Our neighbour, a tenant, wanted to make his own iron gates and

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\*Personal Communication C.A. Jewell, keeper of the Museum of English Rural Life, Reading University.

has had permission after lengthy discussion on condition that the gun-stock was included."

R. Adams\* writes to me from the Isle of Wight describing the five-bar gate adopted by the Nunwell estate prior to the last war, in which the harr and brace were one, a forked oak limb being used as the end member, as in Figure 38a. He also recalls that all the Colehill (Digby) Estate gates in Warwickshire in the 1930's were branded with the letter D.

Plate 41 shows the gates used by a landowner in North Yorkshire; not only are all the gates on the estate made to the same pattern, they are also printed in the same way.

#### Gate Types in Ireland.

As previously noted the agricultural history of Ireland differed markedly from that of other parts of the British Isles, and just as this has led to differences in the types of wall and hedges encountered, so the field-gates are quite distinct from those found elsewhere.

The enormous built-up of population during the early part of the nineteenth century led to the almost complete clearance of the forests. Wood therefore became a scarce commodity; E. Estyn Evans (1942) wrote:-

"The scarcity of good oak timber in a country once famed for its oaks - notice the frequency of the element "derry" in townland names - goes far to explain the prevalence of iron field-gates, which are hung on stout pillars of built stone."

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\*Personal communication.

The Discourse on Ireland in the Calendar of State Papers (1601 - 1603) refers to "a strong pair of... gates with an iron bar in the midst," and Wakefield in 1812 described the typical form as being iron gates with stone pillars; wooden gates were unknown and in any case would have been stolen.

These iron gates are frequently fashioned by the local smith using worn wheel hoops, there is thus a good deal of local variation. Evans in a paper on Ulster field-gates in 1956 suggested that the patterns coincided with the old landed estates (just as they do in England, see above) and also that the best examples were near the road - a touch of ostentation! A few years ago a suggestion was made to members of the Folk-lore and Dialect Section of the Belfast Naturalists' Field Club that a comprehensive study of the distribution of the various designs on iron gates in the counties of Antrim and Down would be worthwhile. Actually little was attempted on a systematic basis but G.B. Adams made some observations on the numbers of the various types in North Down using the transect technique (see Chapter 1) and in 1964 I undertook a similar study in north Antrim. Evans 1942 mentions some Antrim types and I have gleaned isolated scraps of information from elsewhere in these counties from my own observations and correspondence. As much as possible of this is shown in the maps in the folio, but see also Plates 42 and 43.

The massive stone pillars from which these gates are frequently hung are another striking feature of the Irish countryside. They may be round or square in cross-section, and have a conical or pyramidal cap. They are almost always kept whitewashed and are thus conspicuous in an otherwise green and grey landscape. (Plate 44). There are many variants in concrete, the old style

piers gradually disappearing often as the result of a tractor or truck being carelessly driven, or they have been deliberately removed to enable a combine harvester to enter a field for the first time.

Variations appear amongst the traditional gate-posts too. The cylindrical types appear in the north and east of Ireland, particularly in Ulster, while those with a square cross-section seem to be more widespread in the south and west (see folio). In County Meath the usual shape is semi-circular, an intermediate form perhaps between the northern and southern types, Evans (1942). In Co. Antrim the conical caps to the stone piers are smooth, while in Co. Louth a coping of large stones is usual. O'Danachair (1965) describes massive oblong piers from Co. Limerick. The average dimensions are about 3 feet in diameter and 6 feet in height although some pretentious specimens may be 8 or 10 feet tall.

Evans (1957) writes:-

"In the northern counties... the entrance to the farmyard is dignified by a pair of massive stone gate-piers, generally built-up from field-stones in the form of a conical topped cylinder and kept whitewashed. They seem far too massive for the gates they carry, resembling twin bastions defending the entrance to a fortified enclosure. In some areas, probably under the influence of improving landlord or land-agents, field entrances are also dignified by built-up stone piers, and it is possible to explain the fashion as part of the agrarian revolution which resulted in enclosure."

It might appear, for instance, from the association of these gate-posts with landlords residences in Donegal that settlers introduced them to Ireland. Although they do appear in the south of Scotland, Anglesey, Pembrokeshire and even the north of England, it is more likely that these are the result of Irish influence. Evans

suggests that these gate-posts are of extremely ancient origin; in "Irish Folk Ways" 1957, he writes:-

"In Co. Armagh I have heard the farm gate-piers referred to as the man and wife of the house, and one of the pair may have a flat top whereon, it is said, the fairies like to dance. The old people used to place the first of the two plates of champ - the Hallowe'en festival dish of mashed potatoes - on top of the pier. While all this may be no more than an exuberant play of fancy we cannot overlook the megalithic practice of selecting alternating pointed and flat-topped monoliths for some of their ritual erections, symbolising, it is thought, male and female. The twin portal stones of many megalithic chamber graves come to mind, and pairs of stones now standing in isolation, as at Lisdivin in Co. Tyrone, may well have been a symbolic entrance to some vanished ceremonial enclosure."

Earlier (1942) he wrote:-

"I like to think of the Irish rath defended and glorified by two white stone pillars at the entrance, though I confess that this finds no support in reports of archeological excavations."

It would not do to minimise the importance of the rituals and beliefs associated with an object in an attempt to elucidate its origin, none the less it must be stressed that the evidence here is not great in amount and is largely circumstantial. On Evans' own admission there is no archeological material that supports his contention that it is necessary to delve into pre-history in the search for the origin of the northern Ireland gate-posts.

My own feeling is that it is not necessary to search further back than the plantation period of the seventeenth century. Many of the planters built "bawns" or fortified enclosures for stock and these frequently had pillars or turrets at the entrance (See Fig. 37 after Jope (1960)). What would be more natural for the humble but aspiring farmer to imitate the architecture of the gentry on a smaller scale? It is tempting to surmise that there is a correlation between the shape of the gate posts and of the towers on the local "big house". Certainly

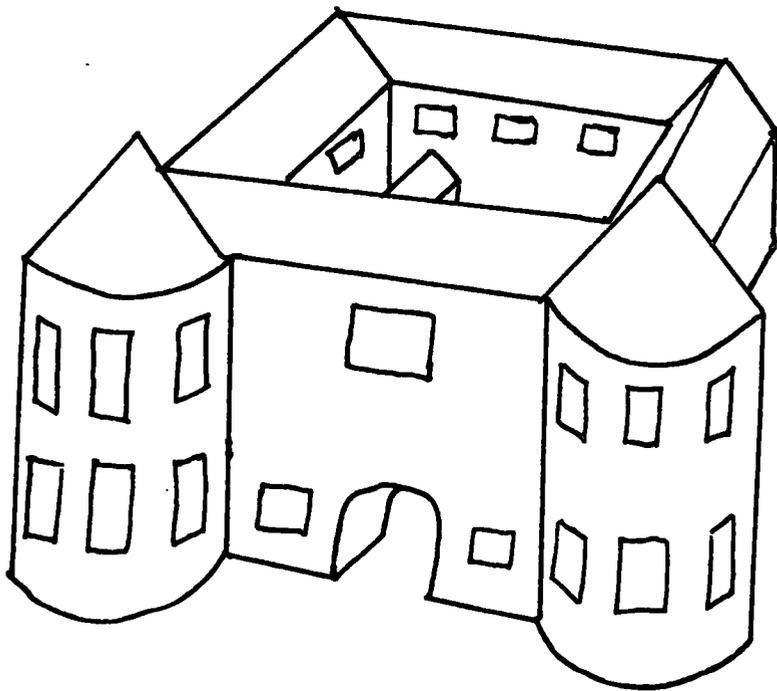


Fig. 37. Typical Northern Ireland  
"bawn", or fortified house

round towers are usual on Ulster bawns and square turrets do appear in the south, but there are many exceptions and evidence is too scanty for anything definite to be stated.

Just as the design of wooden gates in England varies from estate to estate, it seems that in Ireland there is a similar tendency for both the iron gates and the stone piers to differ from one demesne to another. O'Danachair (1965) gives an example from Sir Edward O'Briens demesne in Co. Clare.

As has already been stated, Ireland is one of the "relict areas" in that harr-hanging is still found; the gate swings without hinges or rings-and-hooks directly on its heel, on a projecting iron spike or "spud" which swivels in a stone socket. (See Plate 45).

#### Gates Types in Western Europe.

It is possible to show that the same factors that determine the distribution of gate-types in the British Isles have been at work on the continent of Europe. Just as "primitive" types are to be met with today only in the west and north of the British Isles, so it is necessary to go to the stony refuge corners of Europe to find such things as wood-and-stone gates, spud-stones and harr-hanging. Gates are still hung without hinges in Brittany, Scandinavia and the Balearic Isles, for example (see page 72).

Local and regional variants, quite as characteristic as the regional types found in Britain may be seen and their distributions mapped. As an example of this is an interesting local form found in Holland. It is constructed from two rude wooden planks, suspended from the main limb of a small tree, the swollen base of which forms a counterbalancing weight, to enable the gate to be swung open

easily. An example is shown in Plate 46. This type is found all over the sandy-soils of the eastern Netherlands; it is universal in the province of Drenthe, with the exception of the very northernmost tip. It is also used in the forested area of eastern Friesland - "De Wouden" - as well as in "Twente" and "Achterhoek" in the eastern parts of Overijssel and Gelderland.\*

Just as iron displaces wood as the main material used in the construction of gates in Ireland, because of the scarcity of this material resulting from the early clearance of the forests in the face of very considerable population pressure, so too, in many parts of southern Europe, a wooden gate is almost unknown. In Italy, for example, a simple gate of cast-iron, usually opening in the centre, is the rule. Wooden gates would in any case be likely to be stolen to be used as fire-wood<sup>1</sup>.

Many of the gate designs already described appear on the continent, certain designs seem to withstand strains well and are widely used. Methods of hanging and fastening also vary, and some of these are illustrated as well in Plates 47 and 48.

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\*Personal communication.

## A NOTE ON STILES AND KISSING-GATES.

Stiles are very much the result of the individual whims of farmers and landowners; regional patterns are less distinct than those of gates, fences and walls; the variety is almost infinite. Many different sorts are illustrated by Reece Winstone (1952) and Beddall (1950) op. cit..

In the north of England, particularly where a rock such as Carboniferous Limestone outcrops, steps may be built into the walls; these may simply be a series of very large "throughs" arranged conveniently so that one may step up, or may be rather more elaborate. Alternatively a "squeezer" stile may be constructed using a few very large stones. Squeezer stiles made from a couple of tree-trunks are common in lowland England, as is the simple "step-stile". More recently cast-iron stiles have been introduced to some localities. Turnstiles are common in Berkshire, and a few "clapper" stiles, such as those at Linton in Cambridgeshire and Chedzoy in Somerset, remain.

The stile is a peculiarly English institution; it has been introduced into Scotland and Wales as the result of English influence but is not found widely in Ireland. E. Estyn Evans writes:-

"The wayside stile is another absentee in the native Irish countryside, as is the footpath which is its companion. Short cuts are rarely worth while in a land of tiny fields, and if there is a right of way there is sure to be a tolerable road."

They are also virtually absent from the continent.

The purpose of a stile is to allow the passage of humans while impeding the movement of stock. The distribution will therefore be confined to enclosed areas where stock is an important element in the agriculture, but where there is also a strong arable element (from which the stock must be excluded). The English system of land tenure, with the multiple interests that can exist in a single parcel of land necessitates a complex system of rights-of-way - routes through the fields and pastures along which people may pass to and fro. Gates in many cases would be unsuitable barriers to prevent the escape of cattle or sheep where a right-of-way passed through the pastures as these are only too frequently left open by careless passers-by.

It would seem to me that the stile is particularly well adapted to conditions in the mixed farmlands of lowland England, in which fields containing cattle grazing on permanent pasture abutt on to fields of cereal crops, with innumerable footpaths and rights-of-way wandering amongst them, and I am confident that this is where it originated.

A refinement of the simple squeezer stile is the "kissing gate". In these a swing-gate is hung so that it is self-closing, in a "U" or "V" shaped enclosure. This is quite common in many parts of England, particularly the east and south. Rather a lot of timber is used in the construction of a kissing-gate so they are quite widespread in well-wooded areas, and scarcer elsewhere. (See Fig 38b). William Seymore (1964) writes:-

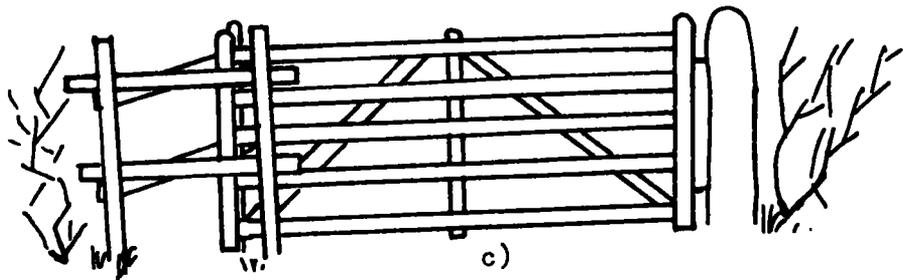
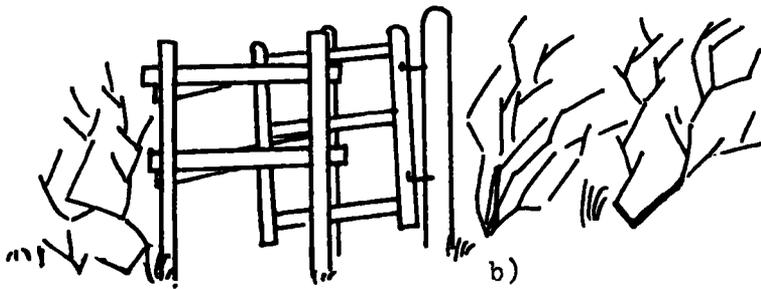
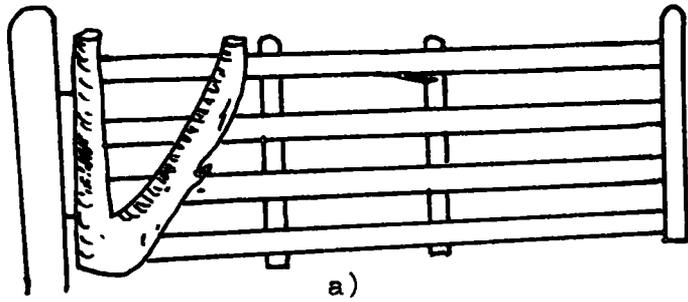


Fig. 38. a) "Estate" gate-pattern characteristic of the Nunwell Estate, Isle of Wight.  
b) Kissing-gate, Cambridgeshire.  
c) Kissing-gate, Merioneth.

"A most useful gate for a paddock where there may be a right of way, or for pedestrians in a wood is the kissing-gate. It is constructed to overcome the average person's seeming inability to close a gate "

Kissing gates are quite often used in conjunction with a normal gate. F. Rodgers mentions an interesting variation on this from Merioneth in which the farm gate also acted as a kissing-gate (Figure 38c).

A type which has presumably been derived from the kissing-gate is the "claphatch" gate of northern England and southern Scotland. Here a semi-circular iron railing takes the place of the wooden fencing. These are particularly common in Cheshire. (N.B. the place-name Claphatches near Congleton, Cheshire.)

On the continent the problem of preventing the passage of stock, while allowing pedestrians to pass freely is sometimes solved by mounting the gate at an angle of about  $60^{\circ}$  from the horizontal, so that it will always fall back into the closed position under the influence of gravity.

There is one other feature that may be conveniently mentioned in this section. Sometimes, in sheep-country, one may see a "water-stile" slung between two drystone walls or hedges across a stream, to prevent the escape of stock. This is simply a gate suspended from a horizontal bar across a stream which flows through an enclosure inside which the sheep are confined. Plate 50 shows an example in the Tinto Hills in the Central Lowlands of Scotland, but I have also seen these barriers in use in the English Midlands and Northern Ireland. Raistrick (1946) depicts an example from the Yorkshire Dales.

## CONCLUSION.

An attempt has been made in the previous sections to describe and illustrate the variety and interest to be found in the gates, fences and walls to be found in the "Atlantic Fringe of Europe" and elsewhere. It now remains for the geographical and ethnological principles illustrated earlier to be summarised.

The geographical determinist, seeking to show how strong was the environment control on man's activities, might stress the fact that very often the types of walling in an area are a simple function of the geology; for example the flint-faced walls in the villages on the Upper Chalk and Boulder Clays of eastern England, the slate fences in the areas of Palaeozoic rocks in North Wales, the regular drystone walls of the Jurassic escarpment, and their more massive counterparts in the Carboniferous Limestone and Millstone Grit areas of the Pennines. He could also mention the relationship that quite clearly exists in some instances between the fence-types of an area and the vegetation. In the marshland areas of East Anglia and the Netherlands reed- and osier- fences are encountered, while wooden fences are the rule in forested areas, for example in the eastern U.S.A. where "zig-zag" or "snake" fences were built by the early settlers. In hostile upland areas where there is little wood field-gates tend to have fewer members and to be smaller.

Undoubtedly the physical environment exercises a strong degree of control, but the features with which this dissertation is concerned may also be interpreted in cultural and historical terms. As has already been mentioned there has been a recent trend in folk-life studies towards the emphasis of human ecology

of rural communities; in place of the detailed description of "tools and tales" in isolation, the tendency is currently to stress the importance of these things in the everyday life of the people and to approach the subject from a sociological standpoint.

The study of field-boundaries provides clear evidence for the intimate relationship that has existed between man and the land since the dawn of agriculture. For example the course of the enclosure movement may be traced in great detail in the pattern of the drystone walls of the Yorkshire Dales or in the network of hedgerows in eastern and southern England and in the Midlands. In Yorkshire, in a few very massive, straight walls we can see the courses of the ancient monastic boundaries - some of these are six or seven feet in height and as many feet across the base, and must be some 700 years old. In the confused pattern of small crofts near the villages can be discerned the piecemeal enclosure of small parcels of land with the rise of the independent farmer in the 16th and 17th centuries, while in the direct, straight, scientifically built walls of the 18th and 19th centuries can be seen reflected the upheaval in rural life affected by the Enclosure Acts, culminating in the last of the General Enclosure Acts in 1844. In the wooded hedge-banks of south-west England we find evidence of tribal rivalries well over a millennium ago, and a comparison of the existing pattern of hedges in East Anglia and the Midlands; with ancient maps and documents provides a striking commentary on the changes that have taken place in the countryside during the last six hundred years:- the early manorial boundaries, the nibbling at the common land as the three-field system collapsed, the planting of the straight hawthorn hedges with the Enclosure Acts and the establishment of the chequerboard field-pattern of the 19th century and the striking decline in the total length of hedges in the area

that has accompanied the swing to mechanised arable farming in the two decades since the second world war, (See Fig.15).

Some gate-types reflect the character of the agriculture of the area in which they are found, such as those resembling hurdles found in some of the sheep-rearing areas of northern England. Forms of transport may also influence the gates that are built; it has been suggested for example, that the transition from slip-bar gates to wood-and-stone gates in parts of the west country was the result of the introduction of the farm-waggon. Similarly I have suggested the possibility that the development of kissing-gates might have been a response to the problem of confining stock to pasture-land over which public rights of way existed.

Ireland provides a number of illustrations of the effect of historic and cultural influences on gate-patterns. The widespread use of iron rather than wood in the construction of gates is a direct result of the clearance of the forests with the startling increase in population in Ireland during the eighteenth and nineteenth centuries, and the possibility that a relationship between the architectural style of the "big house" and the form of gate piers was also mentioned earlier.

It has already been emphasised several times in this work that the peasant village in many parts of Europe three or four generations ago, was very largely a self-sufficient community, producing much of what was required locally, and in any case communications were not good. Often village craftsmen were, when they fashioned tools and utensils from locally available materials, guardians of traditions many centuries old. It is to be expected therefore that when a small group of men worked independently

for generations, that regional distinctions would appear. The form of a bill-hook may be found to vary from even one parish to the next, while gate-designs differ from county to county in England, particularly in details such as the jowl, or mode of fastening, and in the case of the iron gates used in Northern Ireland from one townland to another. Variations in the dialect-terms used in different parts of Britain for the components of gates, the forms of fences in Europe and North America similarly reflect differences in the local traditions of the areas concerned.

In some cases it is possible to isolate and analyse exactly the nature and extent of some of these local traditions. An example of this is the influence of the estate-workshop on the gates of the area. With the rise of large country estates it became usual for a workshop to be associated with each enterprise. Here one or a number of carpenters would be employed in the repair of farm-waggon<sup>s</sup> and carts and in the construction of a wide-range of wooden articles for use on the farm. Much of the carpenters' work would be the construction and repair of field-gates, of which many dozens would be required on an estate of any size, and as only one craftsman or a very small number of workers was involved it would be usual for them all to be made in the same way, sometimes the design would be that suggested by the landowner. A particular style of gate would therefore become the "trade-mark" of all the land owned by one estate. Even when the land was let to tenant-farmers it might be stipulated that the gates be maintained in that style to perpetuate the "brand-image" (See page 83 ). From time

time a workshop that had built up some sort of a reputation for this type of craftsmanship might receive an order to produce a number of gates for a neighbouring farm, and so the influence of one estate workshop might extend over a considerable area. There are many instances of this in south and south-west England. In at least one case, that of John Tapsell, an eighteenth century carpenter who made gates in Sussex, we know the actual identity of the craftsman responsible, (page 83).

Variations quite as interesting as those that occur in space appear in time- it has, for example, proved possible by a study of material of considerable antiquity that still exists, and of old prints and drawings to trace the evolution of styles of gates, fences and walls over several hundred years. Gates, for example, may be followed from the "common ancestor" of the simple wooden barrier through the slipbar gates and wood-and-stone gates that still appear in the western parts of Britain to "extended-harr" types and the gates of fields and gardens today. The analogy with organic evolution is a useful one- in the curve-over of the harrs commonly found on modern ornamental gates we may have the equivalent of a relict organ - an appendix - formerly an important structural element but now reduced to a functionless excrescence. While gate-designs have undergone a fairly rapid evolution throughout the last three centuries, methods of fence construction and drystone walling have remained relatively stable. Some authorities, such as Rainsforth Hannay (1957) have argued that drystone walling as a craft has continued more or less uninterrupted and unaltered for several millennia. Some of the fences depicted in prints and other illustrations made in the fifteenth century seem virtually identical with very much more recent examples. This contrast between the relatively dynamic evolution

shown by gate-types and the stability of drystone walling might in part be due to the fact that while drystone walling was a craft in its own right, some men doing nothing else, gate-making does not seem to have been, the village of estate carpenter including the building of gates with a number of other accomplishments; see, for example, the account by Walter Rose (1937) of the work of the village carpenter.

The distributions of some of the features described in this dissertation serve to emphasize ancient cultural connections; for example the occurrence of rounded gate-posts and certain types of turf-and-stone wall in Ireland, west Wales, the Isle of Man and parts of Scotland suggests that there has been constant traffic in ideas and cultural traits across the Irish Sea for many centuries. Similar correlations may be made with regard to the reed-fences and gates of East Anglia and the Netherlands.

In some cases it is possible to use these features to trace lines of cultural diffusion; harr-hanging is known from sites in Mesopotamia of 5,000B.C. and appears elsewhere in Asia, around the Mediterranean Sea and in Western Europe - a routeway along which many cultural traits have reached the British Isles (see the reference below, Erixon (1938)).

Coming closer to the present it may be shown how settlers from Europe introduced their techniques of drystone walling and gate-construction to the new lands of the U.S.A., Canada, Australia and New Zealand along with their other agricultural skills in the 17th, 18th and 19th centuries, (see pages 44, 49 etc).

The fact that a similar feature appears in two separated areas does not necessarily imply that it was introduced from one area to another, or even that they had a common origin. The problem of "diffusion or independent origin" is a complex one and one that has frequently confronted many archaeologists, ethnologists and folk-life specialists when presented with evidence that a similar cultural trait appears in two or more widely separated regions. To establish a cultural connection, ideally one should have evidence of the occurrence of a complex of several associated features in the areas concerned. Cylindrical gate-posts are a typical part of the Ulster scene, and similar posts are to be found in a few places on the opposite side of the Irish Sea in Anglesey, southern Scotland and in the Isle of Man, yet gate-posts very like those of Northern Ireland appear in a small area of west Norfolk. While it is reasonable to postulate that this form of gate made the short journey across the Irish Sea, particularly as other features such as methods of gate-construction and hanging and certain rituals associated with the gate-posts are or at least were formerly, found in both regions, there is no evidence to suggest that the Norfolk examples have not originated quite independently, (see pages 81 ).

The question arises as to whether the features with which this dissertation is concerned might be used in the delimitation of cultural regions such as "The Atlantic Fringe", or to confirm the definitions put forward by others, as have certain other items of folk-culture. The great Swedish student of folk-life, Sigurd Erixon wrote in 1938:-

"Western Europe is often a transmitter of Mediterranean cultural features to the north... Western Europe is both a receiving and originating area; new forms of culture spread

to the east as well as to the north, Consequently it is often difficult to decide where the boundary should be placed, since this flow of culture often penetrated quite deeply to the east of the continent. Still, to arrive at a clear index of the boundaries of the Western Europe cultural area (i. e. the Atlantic Fringe) in the narrower sense these more widely scattered features of culture are not of such importance as the others."

If ethnological or cultural regions are to be delimited on this basis, a whole assemblage of cultural traits must be taken into consideration. Erixon, in the same paper listed the cultivation of oats, the use of peat as a fuel, the turf-roof, stave-building and the forked fish-spear as having "Atlantic Distributions" in a very limited sense, while there were other features typical of the west European cultural area such as "the employment of enclosures in the forms of earth-walls, hedges and stone walls" that penetrate very much deeper into the continent.

It must be emphasised however, that the distribution of any folk-life trait is by no means statistic, - the dynamic nature of the distributions of certain types of field-gates was stressed in Chapter 4 of the present study, - and recently the transient nature of the distributions of certain culture-elements in Northern Ireland has been ably demonstrated by Alan Gailey, (1964).

There may be identified, from amongst the features that have been discussed in this dissertation, a whole assemblage, most of which was formerly widespread in the British Isles and perhaps Western Europe as a whole, the range of which is now restricted to "relict areas", generally the westernmost margins of Europe. One might list:- slip-bar gates, wood-and-stone gates, gates with extended and curved harrs, heave-gates, turf-walls, and turf-and-stone walls, spud-stones and harr-hanging. Many of these can now only be seen in "the stony refuge corners of Europe," (E. E. Evans, (1957) op.

cit.) the most clearly defined or "Outer" Atlantic Fringe - Scandinavia, Scotland, Ireland, west Wales, Anglesey, the Isle of Man, Devon and Cornwall, Brittany, and the Iberian Peninsula.

Recently a number of geographers have borrowed certain aspects of the ecosystem concept from the biologists with advantage; Frsberg (1957) defined an ecosystem as "a segment of nature, of any magnitude, with its included organisms in their environment." The inclusion of human life and man-made environments in the shape of villages and farm-lands represents a comparatively minor extension of the term. E.E. Evans (1956b) applied certain aspects of the ecosystem concept in his studies of the ecology of peasant life in Western Europe. D.R. Stoddart (1965) writes:-

"The emergence of the ecosystem idea as a tight-knit interacting complex of man and nature -clearly enough stated in the third chapter of Darwin's Origin-. . . in the last few years has begun to be applied by geographers, both as a research tool and as a methodological instrument. . . it links geography with the mainstream on modern scientific thought, in systems analysis and related disciplines, and opens up as yet unexplored possibilities in the application of geography."

An attempt has been made in the foregoing to illustrate the astonishing variety in the field-boundaries of western Europe, and to show how these familiar features of the countryside may be used to throw some light on the close and subtle association that has existed between man and the land for generations - in fact to show the position occupied by these features in the ecosystem. Some of the ways in which certain features of a rural environment of the type discussed are inter-related are summarised in Fig. 39. An essential feature of an ecosystem is its dynamism, the way in which its components and their inter-relationships are changing, but this cannot be shown in a simple diagram. None the less it has been emphasised at several

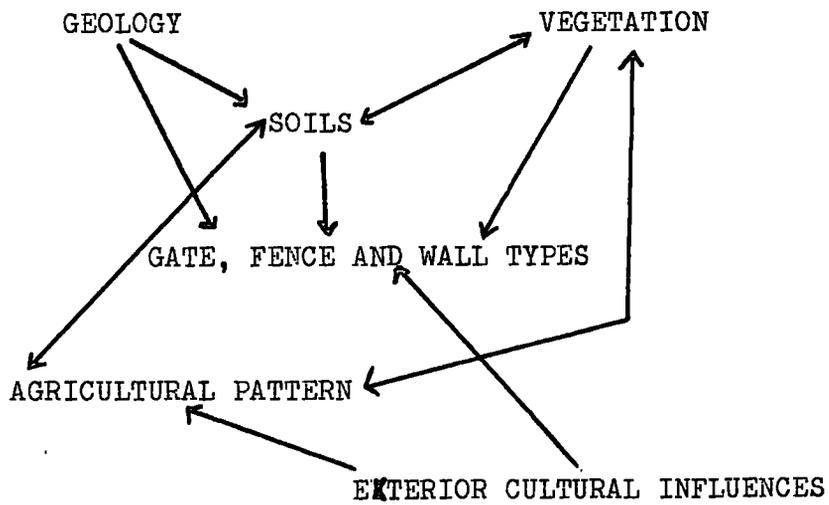


Fig. 39. For explanation see text.

points in this dissertation that throughout historic times the forms of gates fences and walls has changed, as has the role that they play in rural life.

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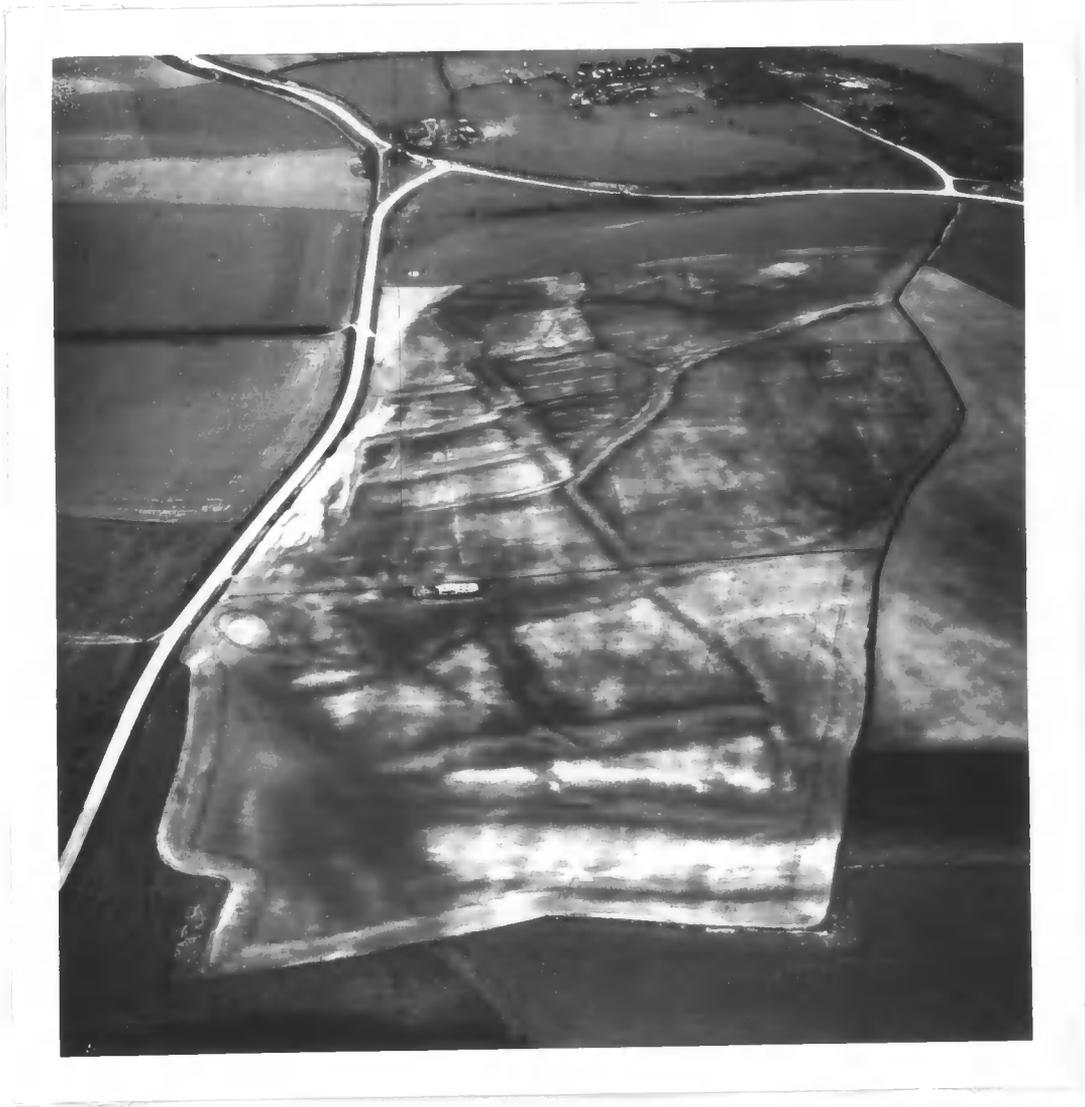


Plate 1. "Celtic Fields" at Chilcomb Down, Wiltshire.  
Photograph:- Aerofilms.



Plate 2. Open Fields at Laxton, Nottinghamshire.  
Photograph:- Aerofilms.



Plate 3. Chrimsote Furrows, Warwickshire.  
Photograph:- Aerofilms.



Plate 4. Drystone crofts near Buxton, Derbyshire. Notice the small closes adjoining the farms and the larger Enclosure Act fields further away.  
Photograph:- Aerofilms.



Plate 5. Drystone Wall in the High Peak of Derbyshire. The area is one of rough pasture over Millstone Grit. Notice the cope-stones, coverband and throughbands.  
Photograph:- P.H.Armstrong, August 1962.



Plate 6. Loosely-built wall from Zennor, Cornwall.

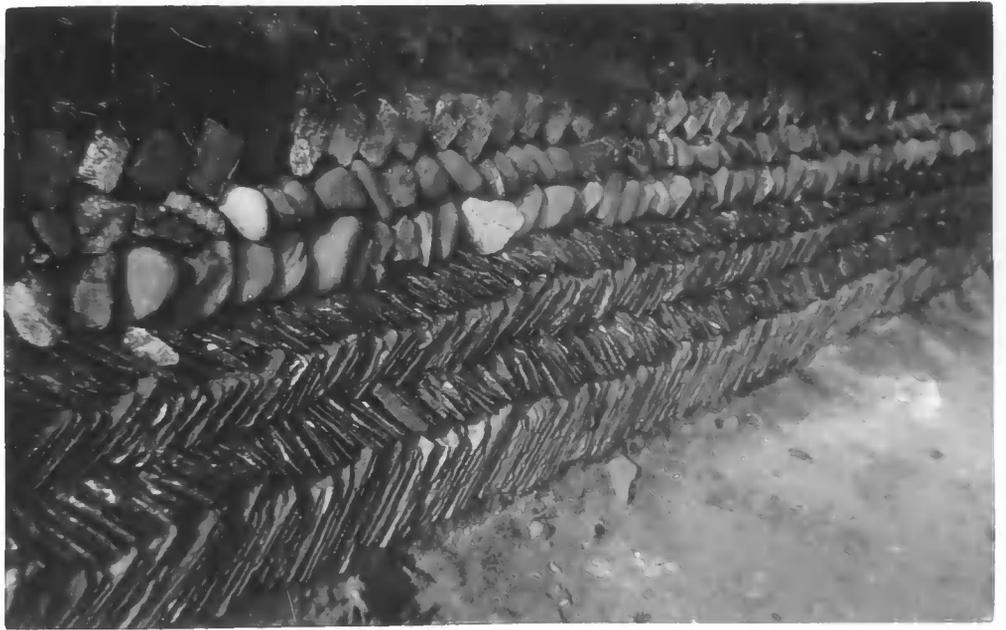


Plate 7. Herringboning in Turf-and-stone wall at Karroogaroo Farm, Andreas, Isle of Man. The work of the son of Mr. and Mrs. Kneale, 1951. Photograph:- Manx Museum.



Plate 8. A Turf-and-stone wall in the course of repair in Cregneash, Isle of Man, March 1949. Photograph:- Manx Museum.



Plate 9. Herringboning in a Turf-and-stone wall near Tintagel, Cornwall, 1965. Compare this with Plate 7. Photograph:- Mrs. D. de L. Nicholls.



Plate 10. Turf-and-stone walling near St. Just constructed in the eighteenth century from mine debris. The arsenic content of the stone leaves the wall almost entirely free from weeds.

Photograph:- Mrs. D. de L. Nicholls.



Plate 11. Turf-and-stone walling near Boscastle, Cornwall.  
The long binding stones are set into the wall every 4 to  
6 feet.

Photograph:- Mrs. D. de L. Nicholls.



Plate 12. Turf wall on the Island of Texel, Holland.  
Photograph:- P. H. Armstrong.



Plate 13. "Snake" fence at Cades Cove, Tennessee, U.S.A.



Plate 14. Reed fence round a duck-decoy at Abbotsbury, Dorset.

Both photographs by P. H. Armstrong.



Plate 15. Simple "split-log fence, bound with osier withies,  
Westendorf, Austria, August 1958.  
Photograph:- P. H. Armstrong.



Plate 16. Slate fence in North Cornwall  
Photograph:- Mrs. D. de L. Nicholls.



Plate 17. Gate with well-made "jowl" in Leicestershire,  
June 1964.  
Photograph:- P. H. Armstrong.



Plate 18. Post from a slip-bar gate of the "slot-and-LP type, near Meltham, West Riding of Yorkshire, September 1965. Photograph:- P. H. Armstrong.



Plate 19. "Wood-and-stone gate at Cockstor Farm, Dartmoor, Devon.  
Photograph:- T. E. Morland.



Plate 20. Detail of harr of above, showing method of hanging.  
Photograph:- T. E. Morland.



Plate 21. Gate with long harr from Shillingford St. George, Devon. A common West Country form.  
Photograph:- T. E. Morland.



Plate 22. Detail of Harr of the above, showing method of construction.  
Photograph:- T. E. Morland.



Plate 23. Gate with long harr at Grand Canyon, Arizona, U.S.A.  
Compare with Plate 21.  
Photograph:- P. H. Armstrong.



Plate 24. Ornamental gate with curved harr at Cambridge.  
Photograph:- P. H. Armstrong.



Plate 25. Ornamental gate with redundant curved harr at  
Cambridge.  
Photograph:- P. H. Armstrong.



Plate 26. Ornamental gate in Cambridge. See text for details.  
Photograph:- P. H. Armstrong.



Plate 27. Ornamental gate in Cambridge. See text for details.  
Photograph:- P. H. Armstrong.



Plate 28.



Plate 29.

Two gates from Middleton Stoney, Derbyshire.  
Photographs:- T. E. Morland.



JOHN CONSTABLE  
COTTAGE IN A CORNFIELD  
*(London, Victoria & Albert Museum)*



Plate 31. Gate near Banbury, Oxfordshire.  
Photograph:- T. E. Morland.



Plate 32. Gate near Beachy Head, Sussex; notice also the  
flint-faced walling. January, 1964.  
Photograph:- P. H. Armstrong.

Compare the designs of the gates in these photographs with  
that in the painting in Plate 30.



Plate 33. Gate on Rowde Field Farm, Wiltshire-Somerset border.

Photograph:- T. E. Morland.

Notice the greatly thickened harr, characteristic of this region.

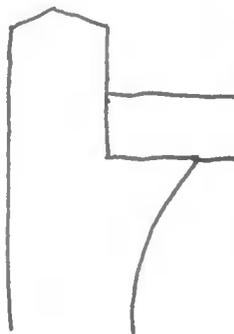




Plate 34. Gate near Bridport, Dorset.  
Photograph:- T.E. Morland.



Plate 35. Gate in Isle of Ely, Cambridgeshire.  
Photograph:- P. H. Armstrong.



Plate 36. "Baulking" of double-gates characteristic of the  
Vale of the White Horse, Berkshire.  
Photograph:- T. E. Morland.



Plate 37. Wooden latch-fastening from the Cotswolds.  
Photograph:- T. E. Morland.



Plate 38. Ancient iron hinge on a gate near Downham Market,  
Norfolk.  
Photograph:- P. H. Armstrong.



Plate 39. Carrstone gate-posts near Downham Market,  
Norfolk. Compare with the Irish examples in Plate 44  
and the folio.  
Photograph:- P. H. Armstrong.



Plate 40. Tapsell gate at Eastdean, Sussex. This gate, one of six surviving examples swings on a central pivot. Photograph:- P. H. Armstrong.



Plate 41. "Estate" gate near Glaisdale, North Yorkshire.  
All the gates on the estate are made to similar specifications,  
and painted identically. March 1964.  
Photograph:- P. H. Armstrong.



Plate 42.



Plate 43.

Two iron gates from Ballycastle, Co. Antrim. August 1964.  
Photographs:- P. H. Armstrong.



Plate 44. White-painted cylindrical gate-posts at Kilarn,  
Co. Down, Northern Ireland. Note also the varied iron  
gates. August 1964.  
Photograph:- P. H. Armstrong.



Plate 45. Harr of metal gate articulating in a spud-stone.  
Ballycastle, Co. Antrim, Northern Ireland, August 1964.  
Photograph:- P. H. Armstrong.



Plate 46. Gate at the "Openluchtmuseum", Arnhem,  
Netherlands. Note also the wattle fence. August 1963.  
Photograph:- P. H. Armstrong.



Plate 47. Method of hanging gates, Isle of Texel, Holland  
August 1963.  
Photograph:- P. H. Armstrong.



Plate 48. A simple but effective wooden latch to a gate on the Isle of Texel, Holland. August 1963.  
Photograph:- P. H. Armstrong.



Plate 49. A simple step-stile in the Isle of Ely, Cambridgeshire.  
August 1964.  
Photograph:- P. H. Armstrong.



Plate 50. "Water-stile" in the Tinto Hills, Lanarkshire,  
Scotland. April 1964.  
Photograph:- P. H. Armstrong.

GATE-POST TYPES IN IRELAND.

Pairs of massive, often white-washed gate-pillars at the entrance to farm-yards are a familiar feature of the Irish countryside.

There is a good deal of variation; pillars may vary locally, from the *dean* of one landlord to that of the next; but some regional characteristics may also be distinguished.

Although types with semi-circular or rectangular cross-sections appear in a few localities, circular and square types are most usual. It seems that the former are most widespread in the north and east of the country, while square pillars are more usual in the south and west, the variations perhaps reflecting regional differences in the style of architecture. (See text.)

Note also the variation in the caps of the pillars - compare for example Waterask, Slane, Dunfer, and Dromintee amongst the cylindrical pillars, and Athra, Lickelstown and Magheralegan amongst the others.

The way in which the gate is set back into the pillar of the Ballycastle example is another variation of very limited distribution.

PHOTOGRAPHS:

Waterask, Magheralegan, Ballycastle - P.H. Armstrong

Remainder - Irish Folk-lore Commission



Ballycastle, Co. Antrim.



Waterask, Co. Down



Magheralegan, Co. Down



Drummanmore, Co. Roscommon.



Dromintee, Co. Armagh



Dunfer, Co. Louth



Athra, Co. Clare



Slane, Co. Meath



Athra, Co. Limerick



Bohernabreena, Co. Dublin



Beaufort, Co. Kerry



Galbally, Co. Limerick



Glen of Aherlow, Co. Tipperary

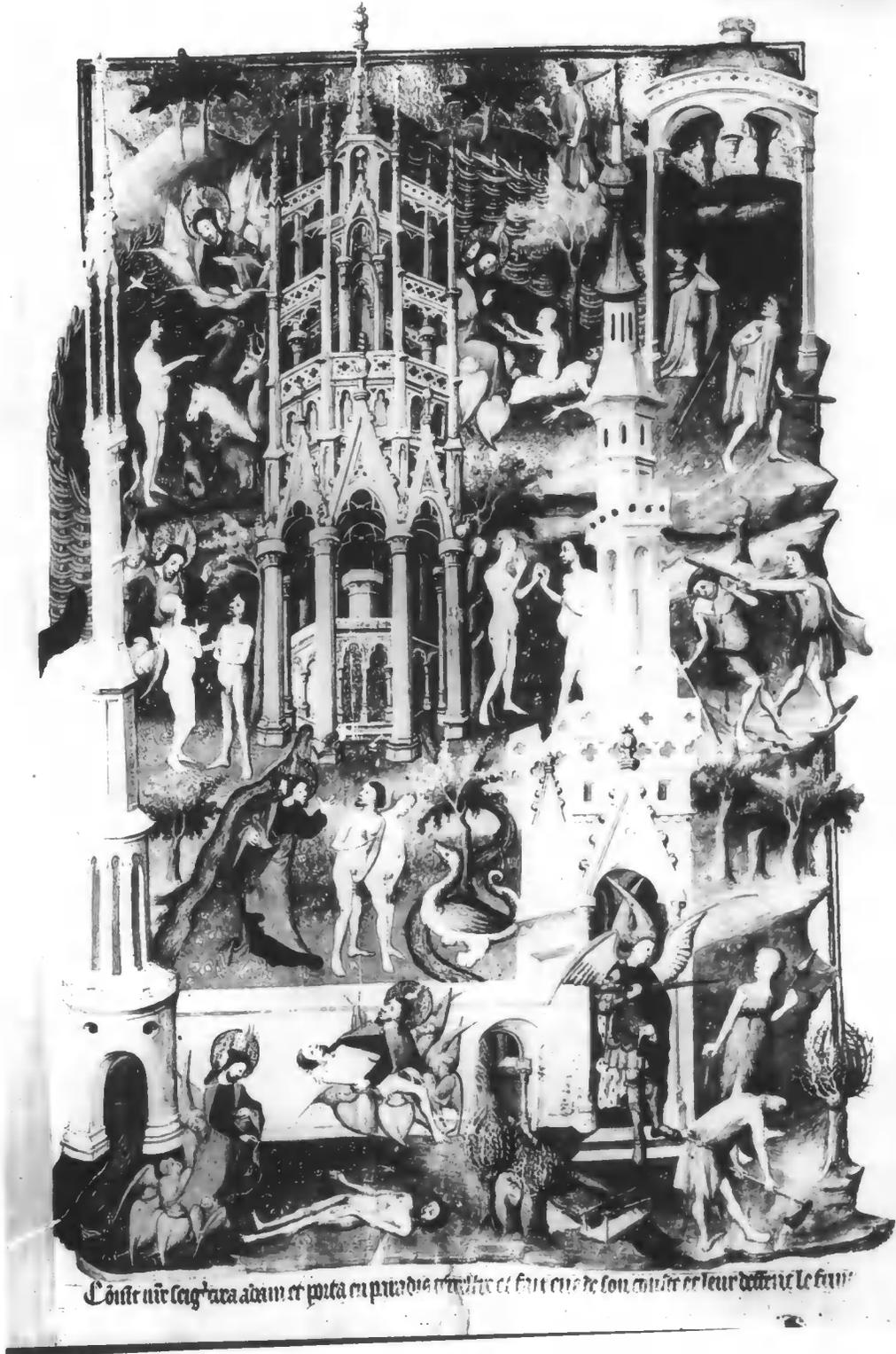


Lickelstown, Co. Kilkenny



Rathangan, Co. Kildare





Early fifteenth century illustration of the Garden of Eden from the Book of Hours by John, Duke of Bedford. Note the wattle fence in the background. Such fences were probably widespread in Medieval Europe, and the one illustrated is very similar to wattle fences to be seen today in parts of eastern England.