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## History of the kitchen

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Designing kitchens necessitates the integration of functional requirements, together with spaces which are pleasant to work in. Before analysing these needs it is worth looking back in time to see the antecedents of the modern kitchen. This will help to articulate and clarify the different activities needed to prepare complex meals and to realise how radically modern technology has reduced both the space and manpower needed to achieve this.

### Early kitchens

The earliest kitchens, all over the world, are simply open fires, most often out of doors which is still so today in countries with a climate hot enough all the year round to make this possible.

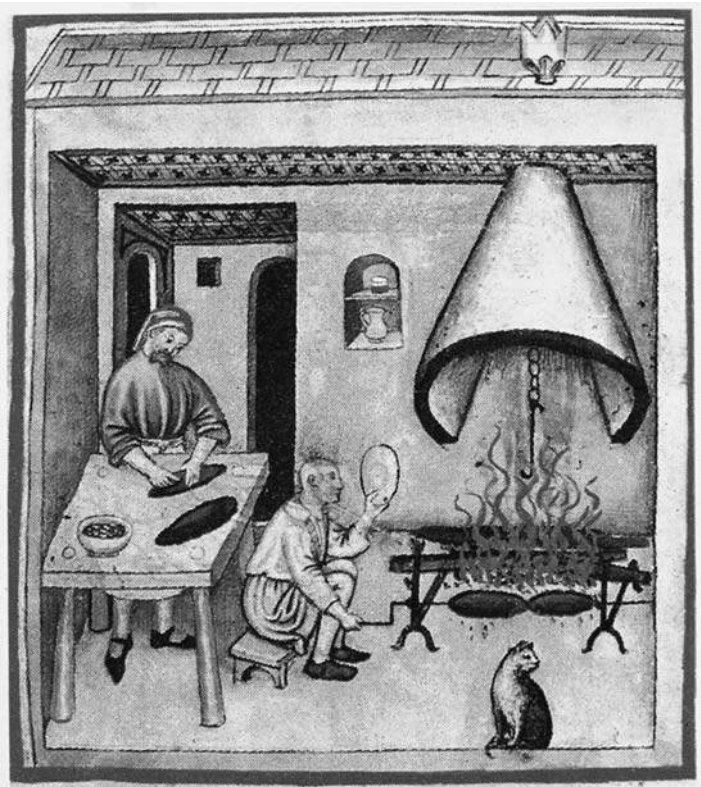


Central hearth with reredos in a croft Birsay in Orkney

In Britain, little is known about kitchens until Norman times. After the Romans left Britain in AD 407, the culinary arts were largely forgotten. Food was often cooked outdoors on cauldrons or spits. This was to avoid the risk of fire and to keep smells out of the houses.

## The central hearth

In Saxon times, food was cooked on central hearths in large, high ceilinged halls. Smoke drifted out of unglazed windows or



Turnspit rotating meat by hand – Italian manuscript (15th century)

a hole in the roof. Everyone ate communally on trestle tables, with the lord sitting at the centre of a table set across one end of the hall, overlooking his household who sat at tables placed along the hall before him. Later on, the lord's table was often raised on a dais to become, literally, a high table. Close by *cupboards*, i.e. boards for cups, displayed the gold and silver demonstrating his wealth. *Andirons* or firedogs were used to support the logs on the hearth and were later incorporated into the wall fireplaces, and became a useful way to support a roasting spit. These spits were at first operated by human *turnspits*. Later, various mechanical means were developed, including clockwork devices and treadwheels turned by dogs.

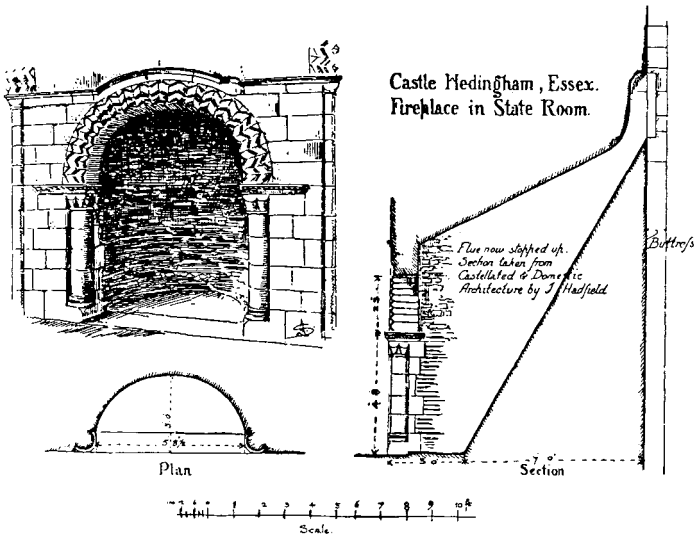


Dog acting as turnspit in an Inn in Newcastle Emlyn  
Aquatint by Thomas Rowlandson 1797

## The advent of the chimney

Soon after the Norman conquest, the fireplace moved to the wall although the central fireplace continued right up until the fourteenth century. Moving the fireplace to an outside wall may have come about because of the impossibility of having a central fireplace in a building of more than one storey. This allowed the development of the flue to carry away the smoke

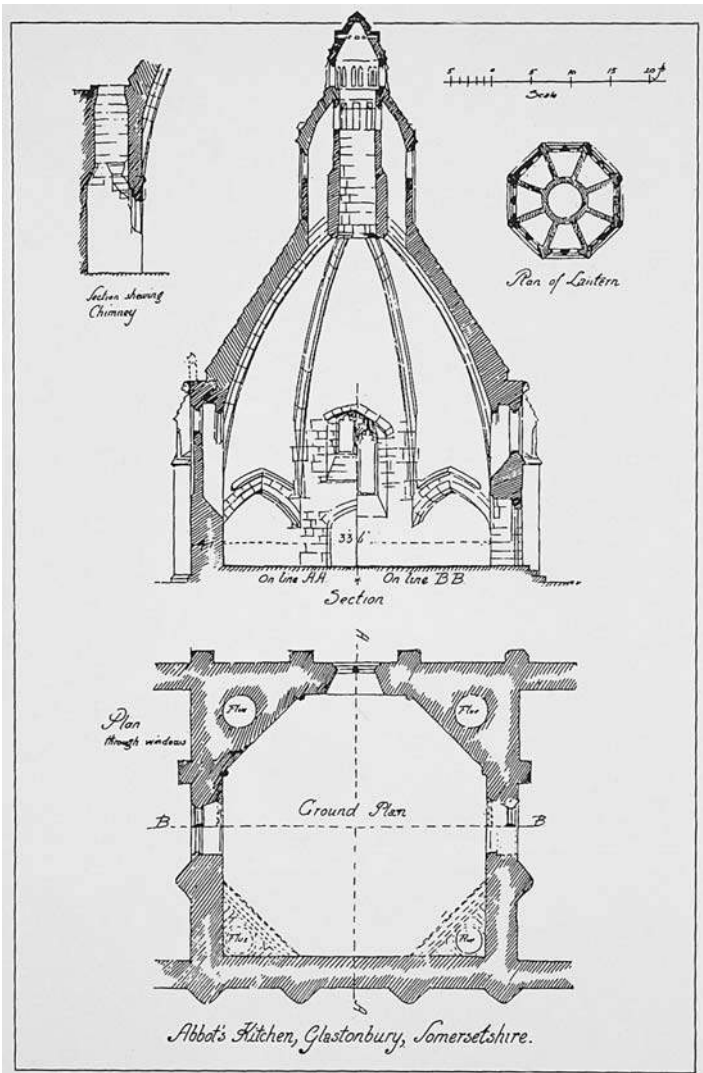
up to the outside air. At first these flues were funnels cut diagonally through the thick walls to an opening higher up on the outside of the wall. Later, tall cylindrical shafts were developed. The word 'chimney' comes from the old French *cheminée* meaning the fireplace or hearth, not the flue as in current usage. Despite the enormous advantage the chimney brought to eliminating smoke from the room, a tremendous amount of heat and smells was generated from spit-roasting meat for several hundred people. So from the fourteenth century, kitchens began to be separated from the great halls. These medieval kitchens were large with high ceilings, sometimes ventilated by louvers in the roof. A fine example of this can be seen in the Abbot's kitchen at Glastonbury.



Norman fireplace in Castle Hedingham Essex showing diagonal flue c. 1140. Drawing by L.A. Shuffrey from *The English Fireplace*

## Fuel

Timber, preferably hardwood, was burnt on the fires, while the poor used dried dung and peat. In the sixteenth century, wood



Abbot's kitchen at Glastonbury Abbey c. 1340.  
The four corner flues were gathered into the octagonal lantern  
Drawing by L.A. Shuffrey from *The English Fireplace*

became scarce and *seacole* came into general domestic use. It was called 'seacole' because it was brought to London and the east coast towns by boat from the open cast pits in Durham and Northumberland. Coal cannot be burnt directly on a hearth, so the basket grate was developed to hold the coals.

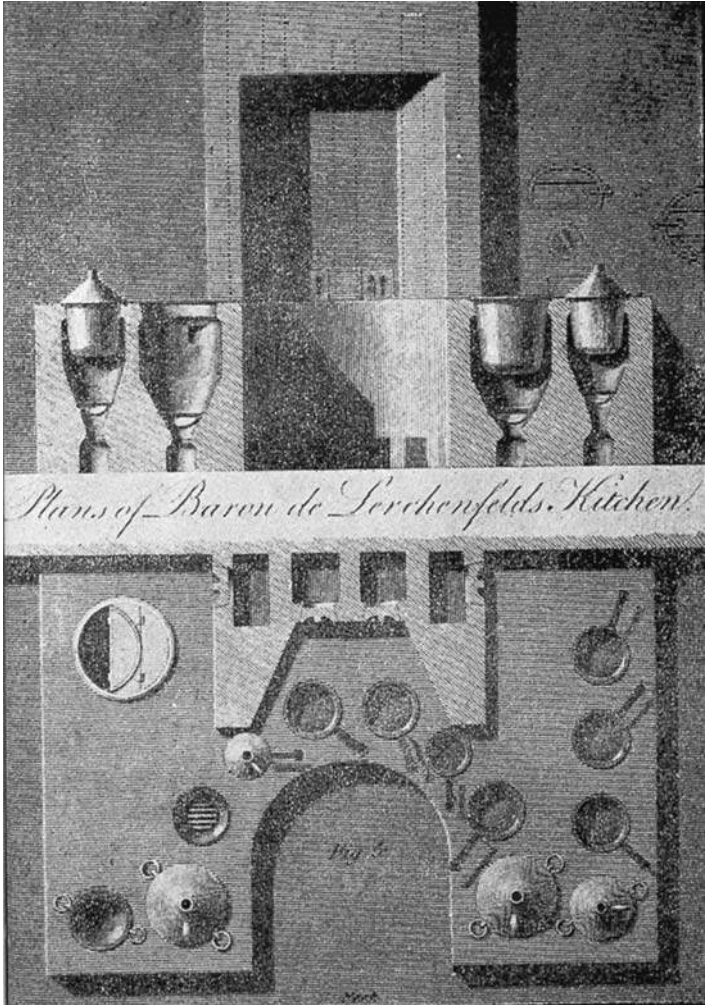
## Early ovens

The first ovens were spaces made under brick or stone hearths, but they were soon moved into the return side walls of the open fireplace. These ovens, which can still be found in old cottages, were to bake bread. A fire was made inside using faggots and the door left ajar to allow the smoke to escape up the chimney over the adjacent fire. When the brick-lined oven was hot enough, the ashes were raked out and the loaves baked in the residual heat.

## Development of the range

There were no innovations in ovens until the invention of the range, which was developed in the eighteenth century by men who were not professional stove makers but inventors such as Benjamin Franklin, Count Rumford and the missionary Philo Stewart.

In the late eighteenth century Count Rumford, an English physicist raised in America but living in Europe, wrote several far-seeing essays on the construction of kitchen fireplaces and utensils. He put forward the first idea for a kitchen range to supersede the open fire. He designed one fireplace for a Bavarian nobleman, which had several small fireplaces hollowed out of the masonry, and arranged in a horseshoe plan. The cook could stand in the middle and attend his pots, which were sunk into holes over the fires. By 1800, he had designed small cast iron ovens for poor families, and proposed roasting ovens set in masonry over a small fire below. He suggested the use of steam for cooking and also economising on heat by using stacked pans. Twin-walled steamers were suggested for the purpose of containing heat more efficiently.



Count Rumford's design for a kitchen for a Bavarian Nobleman 1797. Built of massive brick providing insulation. Pans were fitted into the top over an individual firebox with door to regulate air intake. Two roasting ovens and a hot water boiler were also included

By 1840 the range had been developed as a separate piece of furniture which no longer needed to be built into masonry. Sometimes, in larger houses, the range was brought into the centre of the kitchen, leaving the open fire in the old wall fire-place for roasting.

## The Victorian kitchen

The Victorians still thought it desirable to keep the kitchen, with its attendant smells, well away from the gentry end of the house. In grand homes, kitchens were positioned in the centre of the servants' wing, surrounded by the smaller rooms of the scullery, larder and pantry with separate stores for game, fish, ice and coal. These would be adjacent to the servants' hall with separate rooms for the cook, butler and housekeeper.



Great kitchen in the upper ward of Windsor Castle c. 1855. The kitchen has been modernised by bricking up the fireplaces at the side leaving only one oven at the far end wall. Gas lighting has been installed over the work stations



The importance of the house could be judged by the number of chefs presiding over numerous kitchen maids. Kitchens were full of cooking devices such as roasting ranges, stewing and boiling stoves, turnspits and hot cupboards. However, there were no mechanised devices for washing, ventilation or refrigeration. Water was pumped by hand into scullery sinks and food was kept cool in an *ice box* with ice brought in from an *ice house* outside. Most food was still kept in north facing larders with natural ventilation.

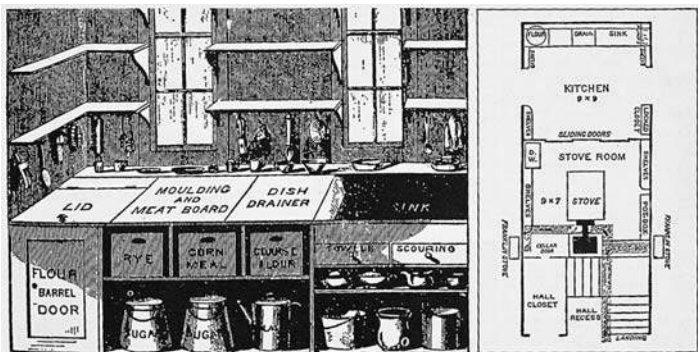
The big change in kitchen design came about due to the social implications of the industrial revolution and the development of mechanisation.



Three iceboxes dating from 1800

## Catherine Beecher

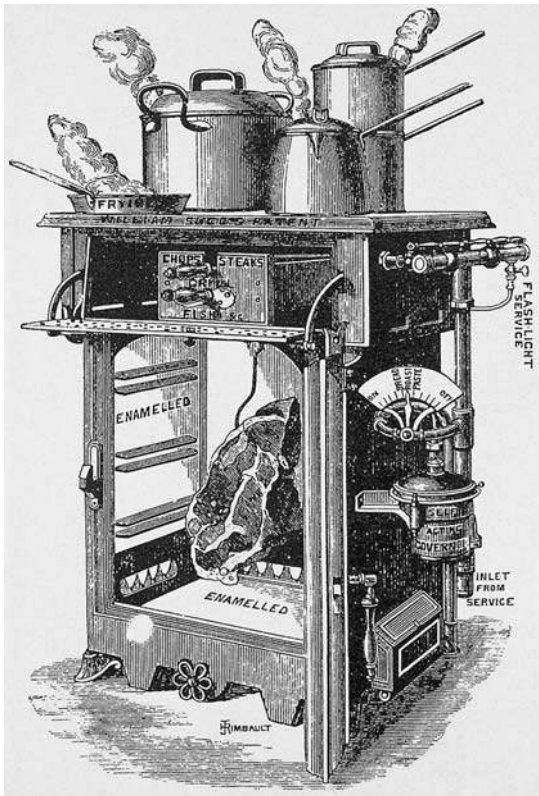
Alongside these early technological innovations, society was changing fast due to the advent of the industrial revolution which provided work for country girls who would otherwise have gone into service for middle class families. These social trends were recognised in America by a truly remarkable woman called Catherine Beecher (sister of Harriet Beecher Stowe). She was a reformer and early feminist. In 1841 she published a *Treatise on Domestic Economy*, which was a text book for girls schools which met with great success. She blamed many women's disappointments on the fact that they were not trained for their profession. She also remarked on the paradox of having servants in a democratic society, and suggested that housework should be divided up amongst members of the family. In 1869, she wrote *The American Woman's Home* in which, with amazing foresight, she proposed a kitchen where the central table and isolated dresser have disappeared. Instead she has a row of compact working surfaces arranged at waist height along the wall, properly lit by windows. To avoid discomfort in the hot American summers and because, unlike in Europe, bread was still mainly baked at home, the range was positioned in a separate room divided from the preparation area by sliding doors.



Kitchen layout advised by Catherine Beecher in 1869

## Gas cooking

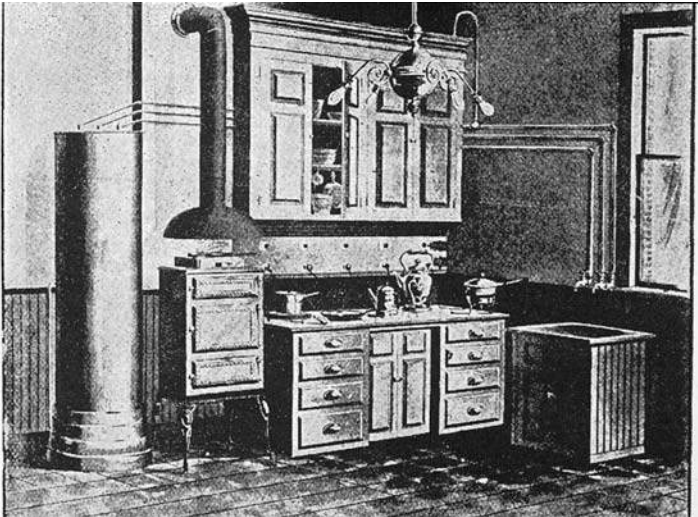
Gas cookers were invented in the first decade of the nineteenth century but were not in general use until 1850. At first they were regarded with great suspicion – people feared explosions, poisoning or food tasting of gas. To begin with they were used in hotels and institutions, but it was not until 1924 that an oven regulator or thermostat appeared which made possible, for the first time, the accurate control of the temperature of the oven. The other great advantage was that the gas cooker did not need a flue, so could be placed anywhere within a room, even in a room without a fireplace.



Charing Cross gas kitchener c. 1850

## Electric cooking

Electric cooking appeared in England in 1890, but was slow to develop due to the sporadic nature of the electrical network. However, as electricity became more generally available at lower prices, electric cookers slowly began to be more commonplace, but were not in general use until 1930.

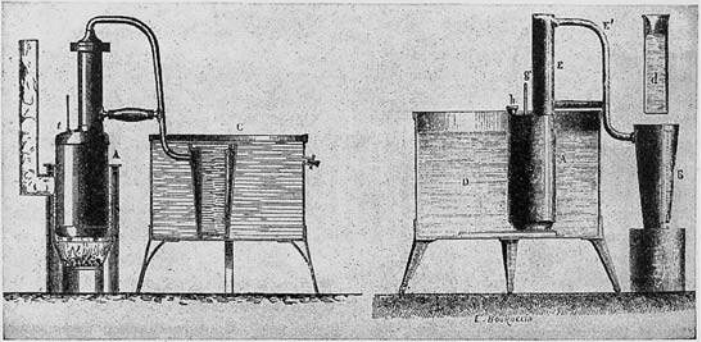


Electric kitchen at the Chicago Exhibition 1893

## Appliances with electric motors

Before domestic electric appliances could be developed, two prerequisites were needed: a reduction to a compact, moveable size, and the introduction of a small built-in electric motor with a sealed motor housing and thermostatic controls. It was not until these were available that refrigerators, ventilator fans and washing machines were made possible.

In 1860, Ferdinand Carré produced a forerunner of the *refrigerator* using ammonia as its refrigerant, but it was not until the 1920s and 1930s were these in general production. Indeed, it was not until World War II that the *freezer* was developed.



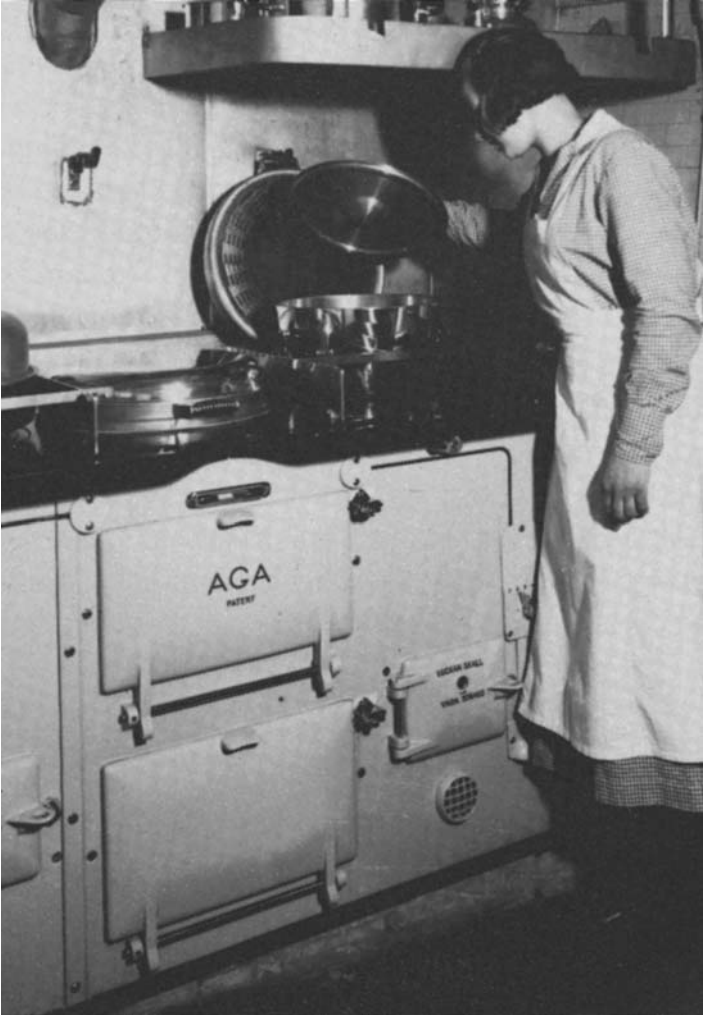
Refrigeration plant by Ferdinand Carré 1860

Similarly, a hand-turned *dishwasher* was patented as early as 1865 but it had to wait until the 1940s before modern dishwashers were mass produced.

*Waste disposers* or 'electric sinks' as they were curiously called at first, were invented in 1929 and in production in the US by 1935.

## Early twentieth century

During the early part of the twentieth century up until the outbreak of World War I, kitchen design progressed very little. Then the supply of female servants dwindled dramatically as many found work in factories, which many women preferred as it brought in more money and gave them greater independence. So, gradually, the middle classes had to start managing without so much help. New gadgets and equipment were invented and the old cast iron ranges were replaced with gas or electric cookers. In the 1930s, the well-insulated solid fuel Aga and Esse cookers were developed, and were often adopted where mains gas was not available.

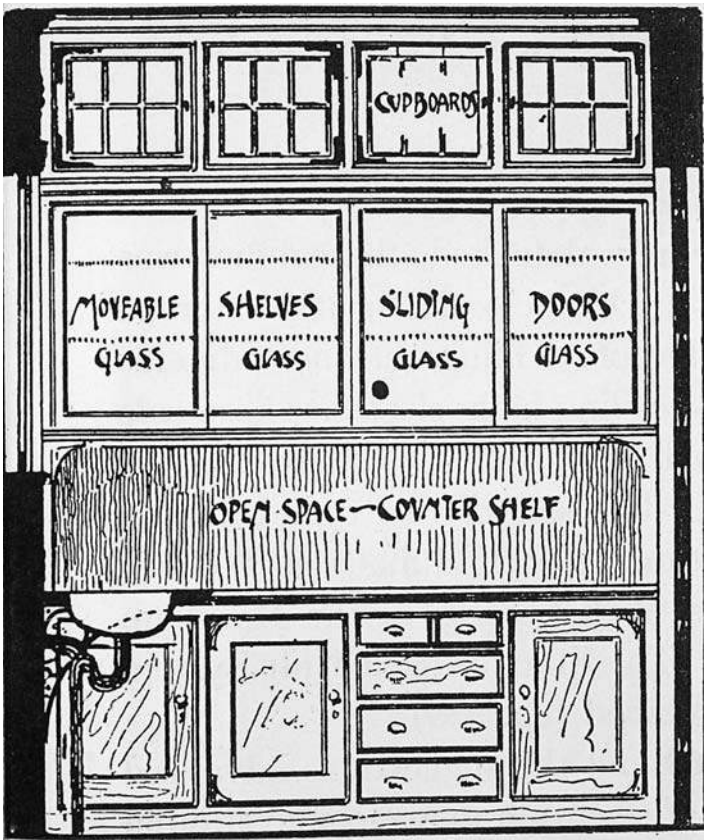


First AGA cooker – patented in Sweden by the inventor Gustav Dalén in 1922.

Photo: courtesy of the AGA archives, Sweden

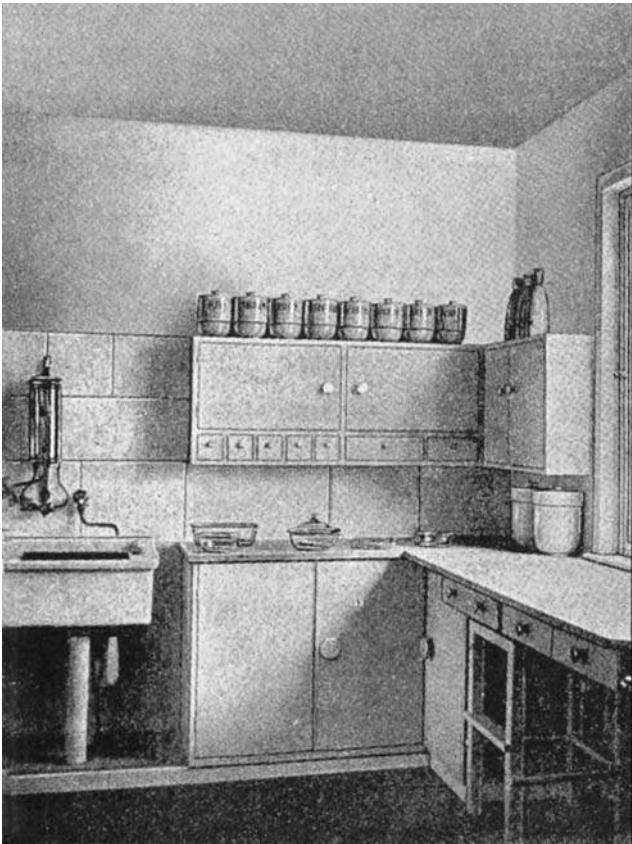
## The continuous worktop

The big change in the layout of kitchens came with the introduction of the continuous built-in worktop lining the kitchen walls, as opposed to centrally placed, free-standing tables. One forerunner of this phenomenon was the late nineteenth century pantry. Here we see the prototype with continuous waist-high counters, a built-in sink with cupboards underneath and cabinets with sliding doors hanging on the walls above.



Typical pantry 1891

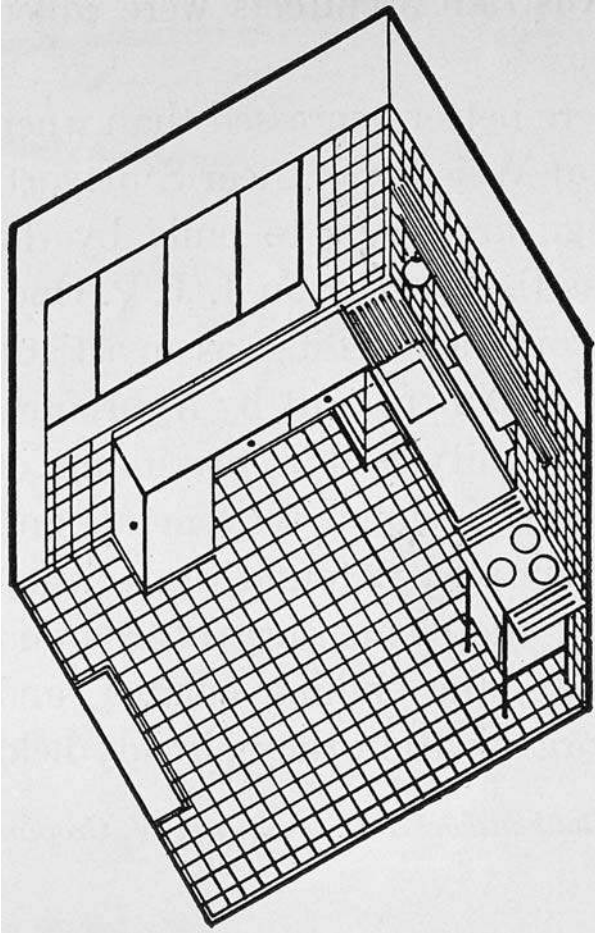
In Europe, the new architecture of the 1920s re-appraised the house plan and based its findings upon functional rather than decorative criteria. In 1923, the Bauhaus exhibited a one-family house called 'Das Haus am Horn'. Here the L-shaped kitchen had a storage centre with the sink and sideboard placed along the wall. The sideboard was split into two elements – a base cabinet and wall cabinets. The worktop continued round the corner, flush up to the gas cooker, which had another worktop on the other side.



'Das Haus am Horn' in the Bauhaus Exhibition 1923



In 1927, J.J.P Oud designed low-cost kitchens for houses in the Weissenhof Siedlung in Stuttgart. These kitchens had a large window and an L-shaped run of continuous worktops with a preparation area, a sink, a food chest vented to the outside and a refuse can emptied from the yard. The cooker was placed to the left of a hatchway communicating directly with the dining room.



Kitchen by JJP Oud for the Weissenhof Siedlung, Stuttgart 1927

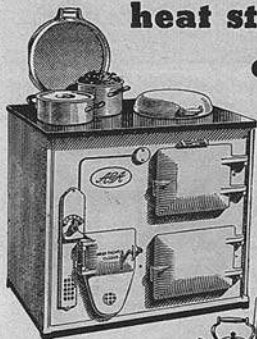
## 1920s and 1930s

In the late 1920s and early 1930s, furniture manufacturers found a ready market for kitchen cabinets. These were designed to hold almost everything the cook needed, complete with flour bins, egg racks and extending tables. They also often had vented compartments as refrigerators were still uncommon. From 1932–34 in the USA, General Electric and Westinghouse opened cooking institutions. Engineers, chemists, architects, nutritionists and professional cooks studied all aspects of the kitchen. The work process was scientifically investigated, and the way was opened for the modern streamlined kitchen.



A so-called 'Planned' kitchen by Hygena in the 1930s which cost £35. The units were finished in cellulose enamel 'in any colour or combination of colours'

# The only heat storage cookers

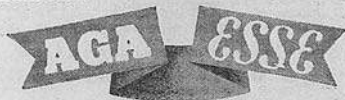


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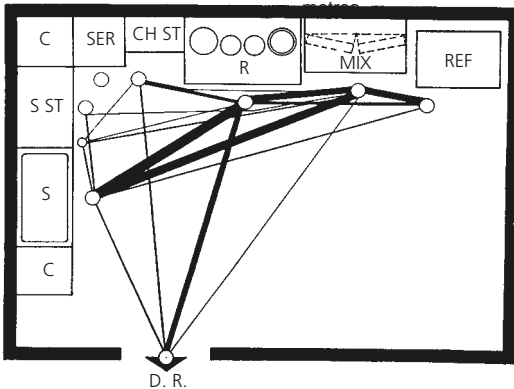
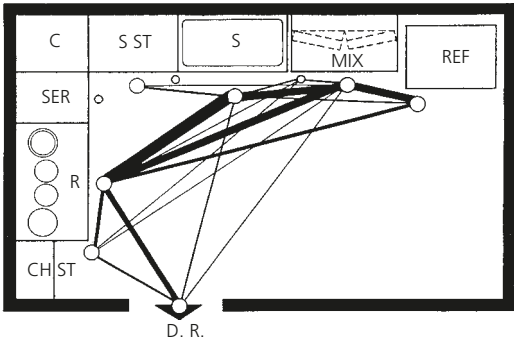
AGA Registered trade mark of Aga Heat Limited (Proprietors: Allied Iron-founders Ltd.). Showrooms: 20 North Audley Street, London, W.1.

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In 1940, a mutual desire to support the war effort made AGA Heat Ltd in London and its rival, the ESSE Cooker Co. in Scotland combine forces to promote their cookers. Courtesy of the AGA Food Service Group archives

### 1940s

In the early 1940s, three work centres were defined: storage and preservation; cleaning and preparation; cooking and serving. These studies were continued at Cornell University in the 1950s, where the concept of the kitchen *triangle* emerged. That is the relationship of the three most used appliances, i.e. sink, cooker and refrigerator. Recommendations were also made for the heights of worktops, the bottom of sinks and optimum levels for shelves.



Travel lines shown in two different kitchen layouts. The travel cost in the lower plan is 29 yards longer than in the top plan according to *Guides for Arrangement of Urban Family Kitchens* by Heiner & Steidl of Cornell University published in 1950

## Post World War II

After World War II, servants, for all but the grandest household, had largely disappeared, having been called up for active service and finding more lucrative employment in industry when returning home. As has been shown, the introduction of efficient labour-saving devices and ergonomically designed kitchens had taken away a large part of the drudgery of kitchen chores. Now, however, the housewife, often left alone for much of the day, felt isolated from the rest of the house. Was it necessary for the kitchen to be so isolated? Efficient extractor fans dealt effectively with eliminating smells. With cabinets well made with hardwearing, easily cleaned surfaces, the kitchen began to be a room to be proud of and a status symbol in its own right. As early as 1934, Frank Lloyd Wright joined the kitchen, called by him 'the work space', to the living room. For the first time we are allowed discrete glimpses of the kitchen through a low-height partition of open shelves.



Glimpse of the kitchen from the dining area of the living room in the Malcolm Willey House, Minneapolis, Minnesota by Frank Lloyd Wright 1934

The demise of the isolated kitchen is also linked with the gradual abandonment of the formal dining room, which instead was more often replaced by a kitchen/dining room. The kitchen now has become the active centre of the household where the family can meet, eat, work and play. Parents can supervise young children and entertain visitors while keeping an eye on the cooking. So we arrive almost full circle back to Saxon times when everyone gathered round the central hearth. Cabinet makers and appliance manufacturers together have developed kitchens to suit the most modest needs right up to the most expensive fantasies. Today the kitchen is the most highly serviced room in the house, and the room on which most money is spent.