THE BRITISH COMMERCIAL GAS ASSOCIATION
1 Grosvenor Place, S .W.1.

KITCHEN PLANNING EXHIBITION

DORLAND HALL.

To be opened by Lord Woolton on
Monday, February 5th, 1945.

The Gas Industry, which supplies millions of British homes, has during the last five years dedicated its maximum resources to the war effort. But it has found time to look to the future and to plan for the years of peace. Intensive research has resulted in new appliances, which not only represent a revolutionary advance but which will create a new standard of comfort for the post-war home.

The Kitchen of Tomorrow.

Nine million out of Britain's 11½ million housewives cook by gas. It follows, therefore, that gas is the domestic fuel preferred by the great majority of housewives. These women look to the Gas Industry to take the lead in planning kitchens for the post-war homes - new labour-saving compact kitchens, designed to give the maximum of efficiency.

What the Modern Housewife Demands.

The younger generation of women, released in their thousands from the Services and munition factories will apply to the traditional job of home-making the experience they have acquired in the war years. Many of them have been doing highly specialised jobs, demanding technical knowledge, initiative and responsibility. They will bring the same efficiency to bear on the running of their own homes. They will not tolerate unnecessary drudgery and the old slip-shod methods of housework carried out under unfavourable conditions. They will regard their kitchen as a workshop and demand the best and most efficient service from it.

One Woman Plans for Millions.

The Gas Industry, realising the importance of suiting the post-war kitchen to the post-war housewife, set up a Domestic Heat Services Committee to study the question, and appointed Miss Jane Drew, F.R.I.B.A. as its Consultant Architect. The ten package and full-scale kitchens shown in this exhibition have all been designed by her.

Miss Drew brings to kitchen-planning the technical knowledge of the architect and the practical experience of the housewife. These kitchens are the result of over 18 months intensive research, during which she visited houses of all types and questioned hundreds of housewives. Her investigations included an extensive tour of the U.S.A. American architects have made notable strides in the field of kitchen-planning, and the average middle-class home in the United States, where the problem of domestic help is even more acute than in this country, is fitted with many labour-saving devices. A very large proportion of the most modern American kitchens are gas-equipped, and Miss Drew has incorporated some of their most practical features, adapted to suit British homes.

Kitchens For All.

The ideal kitchen in the opinion of the Gas Industry is the practical kitchen - the kitchen best suited to the type of household for which it is intended. They have therefore designed a variety of kitchens for different houses. This exhibition shows -

Large and small "package" kitchens for flats in converted houses,

a kitchen for a family flat, housing four to five people;

a "living-room kitchen" for a house in the country or suburbs;

a back-to-back kitchen and bathroom designed for new blocks of flats;

a new type kitchen for a detached, or semi-detached suburban house;

a kitchen with unit furniture and equipment for a professional man's house.

Not "Dream" Kitchens.

The Gas Industry does not hold out to a generation sobered by five years of war and accustomed to look for realities, ill-considered promises of "dream kitchens". In the immediate post-war years there will inevitably be shortages of labour and materials, and the whole purpose of this exhibition, which has the support both of the Ministry of Works and the Ministry of Fuel and Power, is to make a practical contribution to the planning of post-war homes for the people. Some of the kitchens have been designed for the working-class home, and will be within the means of an income of £4 a week. They are intended for the single-handed housewife and mother. Only one of the kitchens - the professional man's kitchen - makes provision for domestic help.

Labour-Saving Homes.

With the realisation that the post-war housewife will not submit to the endless round of domestic drudgery which fell to the lot of her mother, the kitchens are designed to give the maximum of efficiency with the minimum of labour. Careful planning ensures economy of movement. In the average kitchen the housewife is obliged to take 300 steps to and fro in the process of baking a cake; the continuity of working surfaces and close proximity of equipment in these new kitchens reduce her 300 steps to 50. Cookers with raised ovens, and refrigerators built-in at convenient height, will spare her the fatigue of constant stooping.

A drying cupboard (gas heated) for rainy days, gas washing machine, constant hot water from gas water heaters, - these are only some of the "helps" to which the housewife can look forward, "helps" that are also colourful and attractive in appearance.

Safety-First Kitchens.

Recent statistics prove that 54 per cent. of the total of fatal accidents take place in the home, and of these 17.8 per cent. occur in the kitchen. A large proportion of these accidents are avoidable. The remedy is to be found in good planning and efficient

lighting. Avoidance of accidents has been given special consideration in the designing of these kitchens. No storage cupboards have been placed above 6-ft.8inches, cookers are fitted beyond the range of window curtains.

Colour.

The housewife who works in drab ugly surroundings will become consciously, or unconsciously, depressed by them. Gay and daring colour schemes have therefore been evolved for these new-type kitchens. Walls are covered with gleaming enamel paint, while some of the cupboards and fittings are of anodised aluminium, in pale blue, green or yellow.

Materials.

New resources in material, resulting in many cases from wartime experiments by industrial organisations, will be available in the post-war home. Many of them are shown in this exhibition. Plastics are employed in unit furniture; sinks are of stainless and enamelled steel - the latter is also used with effect for the new venetian blinds in soft glowing colours, which create an illusion of sunshine in the kitchen.

Furniture.

Standard units of kitchen furniture will help in the first stage of reconstruction - the reconditioning and conversion of existing houses, - as well as in the planning of kitchens in new dwellings.

Items of kitchen furniture and equipment (the dimensions of which follow the recommendations of the British Standards Institute) have been designed and are used in all the model kitchens exhibited with one exception, the Kitchen-Bathroom Unit. These units can be mass-produced in a variety of materials, timber, steel, aluminium, etc., and will enable the housewife to add to her kitchen as the needs of the family increase and her budget allows.

Three different arrangements of units are exhibited to show the flexibility of units and suitable combinations of them for any part of a kitchen.

Prices.

No prices are quoted for any of these kitchens. It is impossible to give any accurate forecast of the post-war cost of gas or electricity, since both will depend upon the price of coal. It is, however, emphasised that these kitchens have been designed to be well within the reach of the small wage earner and for the types of houses which will be erected by local authorities.

Housewives to Judge for Themselves.

Comments of visitors will be collected by staff attendants and summarised at the end of the exhibition. Suggestions from housewives will be taken into consideration in selecting the final designs of equipment and the general planning of kitchens.

APPENDIX.

DESCRIPTION OF THE PACKAGE AND FULL-SCALE KITCHENS EXHIBITED.

Combined Kitchen Units.

Standard units of kitchen furniture will help to solve one of the first problems of post-war construction, the reconditioning and conversion of existing houses.

Mass-produced in a variety of materials, timber, steel, aluminium, etc., they will be available at very reasonable prices. As the needs of the family increase the housewife can add to her kitchen, unit by unit.

Three different arrangements of units are shown here. The first incorporates a horizontal gas cooker. The units are of timber, the table top being of plastic. The section is 10-ft.6 ins. long with a depth of 1-ft.9 ins.

In the second arrangement timber is used for the units, with the exception of the vegetable drawers which are of enamelled steel. A horizontal cooker and refrigerator are used in conjunction with various cupboard units, the whole section measuring 10-ft.9½ in. by 1-ft.7 in. deep.

The units in the third example are also of timber and a vertical cooker, with extension pieces to continue a level working surface, is incorporated. The section measures 8-ft.9¾ in. long by 1-ft.9 in. deep.

Package Kitchens.

The package kitchen is designed as a complete unit to provide all the essential equipment of a well-planned kitchen in the minimum of space. Prefabricated, it can be delivered to the owner in one or two parts, ready for quick assembly. Primarily intended for the conversion of existing houses, it is ideal for the small household and the one-roomed or two-roomed flat, and is fully adequate for the entire cooking required for a family of four.

Of the two package kitchens shown here the smaller measures only 5-ft.6 in. long by 6-ft.9 in. high and 1-ft.9 in. deep, and can easily be fitted into a curtained recess in the living room, for steam and cooking odours are removed by a mechanical extractor set in the wall. The kitchen is equipped with a gas cooker, sink water heater and gas-operated refrigerator. These are combined with standard unit furniture manufactured in anodized aluminium with cork between. The sink and draining boards are of enamelled steel.

The second package kitchen is slightly larger, measuring 7-ft. long by 5-ft.9 in. high and 1-ft.9 in. deep. The units which compose it are of enamelled steel. The transparent cereal drawers demonstrate an interesting use of plastic.

Dining Kitchen for a Family Flat.

Reel (1) Two Girls

73.4 per cent. of the total families in Great Britain are in the category of small wage earners, with incomes averaging less than £4 a week. After the war many of them will be housed in the new blocks of flats which Authorities are planning to erect in most of our large towns. This kitchen has been designed for a family flat of this type occupied by two adults and two or three children.

The plan provides for a kitchen (measuring 12-ft.3 in. by 11-ft. 9 in.), a drying balcony, hall, bathroom and separate W.C.

Features worth noting in the kitchen are the new type of gas cooker with griller compartment incorporated in the oven, the unit furniture of timber, the mechanical extractor for the removal of steam and cooking odours and the gas refrigerator built-in at a convenient height. A gas-heated linen cupboard is fitted in the hall, while hot water is provided for the kitchen by a sink heater, and in the bathroom by a gas heater serving bath and wash-basin. The balcony screens the direct rays of the sun from the larder window which opens into it, and on the opposite side has a rubbish chute. Horizontal piping has been reduced to a minimum, and one central vertical duct takes the waste from bath, basin and W.C.

X "Back-to-Back" Kitchen-Bathroom Unit. X Reel (3)

This convenient arrangement is planned for a flat housing a family of three to four people of the middle-income group (i.e. weekly income between £4 and £10).

The unit comprises a hollow wall with built-in kitchen fitments on one side and bathroom fittings on the other; in the wall are housed all the waste pipes, cold supply pipes and gas and electric services.

The wall unit is faced with anodized aluminium sheets, backed with cork for insulation against sound. The material used for the construction of the whole unit is a light but strong framework of aluminium alloy. Cooker, furniture and stores unit are also of aluminium, while the kitchen sink and work-table are of stainless steel; the bathroom wash-basin is of enamelled steel.

In the kitchen, flush, easily cleaned surfaces and a long continuous work top make for labour saving. The hot water supply comes from a multipoint gas water heater built in to the dividing wall; there is an access panel on the kitchen side. A recessed plate rack and recessed bathroom shelves are other features of the design.

The gas cooker is fitted with a large oven placed just below the work top, hot closet for warming plates and a special grilling compartment. Below it is a cupboard for pots and pans and next to it a built-in gas refrigerator.

The total length of the unit is 12-ft.3 in.

X The Living-Room-Kitchen. X Reel (2) Family Scenes.

For the single-handed mother the problem of rearing a family and running a home will be simplified by a kitchen of this type, for the 4-ft.6 in. partition which divides the working part from the living-room part will enable her to keep an eye on her children while she is cooking without having them round her feet all the time.

Designed for the low-rental house (probably terraced or semi-detached), in town or country it is one answer to the universal demand for more living-room space in the post-war home. In a house of this type provision is usually made for only one sitting-room, but the dining-annexe of this kitchen affords all the advantages of another living-room. The housewife, instead of being cut off from family life can join in conversations or listen to the wireless while she prepares meals and washes up.

The design incorporates a dining annexe, kitchen and utility room, in an overall space of 24-ft.8 in. by 10-ft.9 in. The kitchen recess measures 6-ft.9 in. by 6-ft. and the utility room, which opens on to a tiled drying terrace, 8-ft.4 in. by 6-ft. A 4-ft.6 in.high partition divides dining annexe and kitchen, so that the mother of the family can keep an eye on the children while she is busy preparing the meals. On the living room side is a built-in seat

providing seating along two sides of the dining table. The room is warmed by the coke boiler supplying hot water in winter; a gas fire is fitted for use on chilly days when the boiler is out of action. A glazed door opens into the garden.

The kitchen recess has on one side built-in cupboards, incorporating a refrigerator and a larder with sliding door; on the other two sides is a continuous working surface with cooker, hot-plate, sink and draining board all on the same level, and at a height of 3-ft. The cooker is a new design with raised oven and plate warming cupboard and a sink water-heater gives the kitchen an independent hot water supply in summer.

The utility room is finished in hard plaster, painted, with glazed asbestos splash-backs. The floor is covered with quarry tiles. The room is provided with a large sink, wash-boiler fitted underneath a removable draining board, a gas-heated drying cupboard and a work bench and space for storing tools.

A mechanical extractor fitted in the kitchen keeps the atmosphere free of cooking smells and steam.

X Working Kitchen for Semi-Detached House. X Real ① One girl

This kitchen is suitable for a universal "semi-detached" type of house for a family of four to five people of middle class income. Measuring 11-ft.10 in. by 15-ft. it provides space for the taking of breakfast or an occasional light meal, as well as for routine kitchen work.

The layout of the kitchen follows the normal sequence of work. By the side of the outside door is a delivery hatch for tradesmen which serves straight on to the work table. Larder and built-in refrigerator are also close to the door for easy storage of foodstuffs. Provision for storage includes a long utensil cupboard, a drawer unit, a vegetable unit and two wall cupboards with glass doors.

Beneath the delivery hatch a continuous work top allows the housewife to sit at much of her work. A double sink, a garbage chute with removable containers and cupboards for cleaning materials are fitted on this side of the kitchen, as is also a cupboard housing a draw-out gas wash boiler. The cooker, which is continuous with the work-top, has a raised oven. Between it and the coke boiler is a cupboard taking two coke hods.

The coke boiler, which is gas-ignited, works in conjunction with a gas circulator; when the boiler's heat is not wanted in summer, the circulator takes over the job of providing hot water. Next to the boiler is a gas-heated drying cabinet. Thus the equipment for heating, hot water and clothes drying is conveniently grouped together.

Unit furniture in this kitchen is of steel, with stainless steel sinks; timber is used for the work table and removable draining board.

The wall separating kitchen and dining room is fitted with a service hatch and a "two-way" crockery cupboard accessible from both rooms.

Kitchen for a Large House.

This kitchen, which is planned for a professional man's home is intended for a large house, or for a household where much entertaining is done. It caters for a family of seven to eight people, and is the only kitchen in this series designed for an income of over £500 a year.

With the assumption that domestic help will be available the plan incorporates a staff dining alcove.

The overall dimensions of the kitchen are 24-ft.9 in.by 13-ft, the dining recess measuring 6-ft. square.

Automatic gas-fired central heating and water heating plant for the whole dwelling is housed in a boiler room adjoining the kitchen. A separate laundry is also envisaged.

One side of the kitchen itself is devoted to store cupboards and a large built-in refrigerator. On the window side is a long work tabl of stainless steel fitted with a sink for vegetable preparation. A double sink for washing up is provided in the servery adjoining. The gas cooker has two ovens, six boiling rings and a large grill. A pot rack stands next to it and both pieces of equipment are set below a glass partition which divides kitchen and servery. On the servery side this screen is fitted with shelves for glass and china. A ventilating duct with extract fan is fitted over the cooker.

Other features of this kitchen are the heated towel and teacloth rails, the venetian blinds with enamelled steel slats to the windows and the food preparation table of stainless steel, marble and teak.

The unit furniture is of anodized aluminium and cork back, the exterior finish being pale green with the interiors finished in the natural colours of the material.

OTHER EXHIBITS.

Prefabricated Hot Water Supply Unit.

The unit is designed for the requirements of a small house. It consists of two components, the lower of which contains the coke boiler and a hot cylinder of 30-35 gallons capacity: in the upper component provision is made for a linen cupboard and cold water storage tank.

Each component corresponds with storey height and is built of light steel sections clad with ½" Kimoloboard. Brackets for the support of normal floor constructions can, as shewn, be secured to all four uprights, allowing for varying heights of floor construction. Each upright is capable of supporting 130 square feet of normal floor construction: thus no weight-carrying partitions will be required.

A gas circulator in the lower component provides for hot water supply during the warm season.

The model of a pair of small semi-detached houses shews the application of the unit in its various functions. Note the wide porches and the provision for refuse bin and delivery and storage of fuel.

The unit has been designed by Walter Segal for the London and Counties Coke Association.

Prefabricated Plumbing Unit.

The various designs of factory-produced plumbing and heating systems invented in 1943 have now been further developed. The unit shown has been extended to serve a lavatory basin in an adjoining bedroom and an additional sink in the utility room. A gas water heating unit is now included, as well as all necessary piping, gas supply pipes and connections. The whole unit is assembled in the factory, all the components being fitted into the light steel mast. On the site the minimum of connections needs to be made.

The unit is designed for simple, indeed fool-proof, assembly, at the same time ensuring rapid construction in the factory and installation on the site.

The "one-pipe" system is a feature of the design and the main water pipe is fitted internally, allowing for easy access to the system and obviating risk of frost.

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BRITISH COMMERCIAL GAS ASSOCIATION.

INDUSTRY HOUSE, 1 GROSVENOR PLACE, S.W.1

KITCHEN PLANNING EXHIBITION - DORLAND HALL.

The Kitchen Planning Exhibition, which will be open to the public (admission free) from Tuesday, February 6th to Saturday, March 3rd daily from 10 a.m. to 5 p.m. (Thursdays 10 a.m. to 6 p.m.), is a part of the Gas Industry's contribution to the Nation's great programme of re-housing.

The Gas Industry in 1943 appointed a Domestic Heat Services Committee representative of the technical and commercial aspects of the Industry and dealing with all matters connected with the fuel services of the home.

The Domestic Heat Services Committee appointed a woman architect, Miss Jane B.Drew, F.R.I.B.A. as their Consultant, and in co-operation with her undertook an exhaustive survey of the social and economic aspects of kitchen life and the design and equipment of kitchens. Their researches extended to all the countries possible under war conditions, including America, to which Miss Drew paid a personal visit.

This pioneer piece of research had two main objectives:- to give a better life to women, within reach of their post-war incomes; and to suggest ideas to the manufacturers and designers of kitchen equipment in readiness for the switch-over from war to peace production.

The outcome of this research - technical suggestions for domestic fuel services by the Gas Industry, and, on the architectural side of kitchen planning, the recommendations of the Architect Consultant - is presented to the public in the Kitchen Planning Exhibition.

The main conclusion from the research undertaken is that, while there is no one ideal kitchen to suit all needs, most needs fall into a few given categories and that for each of these there is a solution within the range of present-day technical design and national resources, and - which is of great importance - the family's financial means.

It is hardly too much to say that in the design of the ten package and full-scale kitchens exhibited every phase of the housewife's work and every minute of her time in the kitchen have been considered. Uniform levels of working surfaces, the layout of equipment to follow the correct sequence of operations and careful attention to such details as towel rails, tray racks, garbage disposal, etc., make for the saving of steps and labour. At the same time space has not been sacrificed to equipment.

Avoidance of accidents has been given special consideration in the designing of the kitchens, for it has been recognised that good planning and efficient lighting can do much to remove from the kitchen the stigma of being "the most dangerous room in the house".

A special colour scheme, which boldly departs from the usual utilitarian decoration of this part of the house, makes each kitchen something more than merely a "women's workshop" - a room which is pleasant as well as efficient to work in.

Finally, it has been borne in mind that, in addition to the building of new houses and flats, a large number of existing dwellings will call for reconditioning or conversion into flats, and that there

must be greater scope provided than before the war for making use of the principles of standardisation and prefabrication.

Briefly, the planning of the Exhibition recognises firstly, that housing will be "priority No.1" after the war, and secondly, that the kitchen is the hub of the home. Planning and good equipment have an importance that cannot be estimated, a fact which is stressed throughout the displays.

The Exhibition has the support of the Ministry of Works and the Ministry of Fuel and Power.

Detailed descriptions of the 10 kitchens and other exhibits are attached, together with lists of manufacturers co-operating. Copies of the plans of the kitchens are available to architects and housing authorities on application to the British Commercial Gas Association, 1 Grosvenor Place, London, S.W.1.

Description of the Chosen Types of Package and Full-scale Kitchens.

Unit Furniture. Combined Kitchen Units.

Standard units of kitchen furniture will help in the first stage of reconstruction - the reconditioning and conversion of existing houses, - as well as in the planning of kitchens in new dwellings.

Items of kitchen furniture and equipment (the dimensions of which follow the recommendations of the British Standards Institute) have been designed and are used in all the model kitchens exhibited with one exception, the KITCHEN-BATHROOM UNIT. These units can be mass-produced in a variety of materials, timber, steel, aluminium, etc., and will enable the housewife to add to her kitchen as the needs of the family increase and her budget allows.

Three different arrangements of units are exhibited to show the flexibility of units and suitable combinations of them for any part of a kitchen.

The first arrangement incorporates a horizontal gas cooker. Units are manufactured in timber, the table top being of plastic. The section is 10-ft.6-in.long with a depth of 1-ft.9-in.

In the second arrangement timber is the material used for the units, with the exception of the vegetable drawers which are of enamelled steel. A horizontal cooker and refrigerator are used in conjunction with various cupboard units, the whole section measuring 10-ft.9½-in. by 1-ft.7-in. deep.

The units in the third example are manufactured of timber and a vertical cooker, with extension pieces to continue a level working surface, is incorporated. The section measures 8-ft.9¾-in.long by 1-ft.9-in.deep.

Large and Small Package Kitchens.

Next are shown two PACKAGE KITCHENS. Each of these contains in a minimum of space all the essential equipment of a well-planned kitchen. At the same time they are designed for prefabrication and delivery to the user in two or three parts ready for quick assembly.

The smaller of the two kitchens, measuring 5-ft.6-in.long by 6-ft.9-in.high and 1-ft.9-in.deep, is intended for a married couple or two people spending most of the day away from home at work. It

incorporates a gas cooker, sink water heater and refrigerator, combined with standard unit furniture manufactured in anodized aluminium with cork between. Sink and draining board are of enamelled steel.

The second package kitchen is slightly larger, measuring 7-ft. long by 6-ft.9-in.high and 1-ft.9-in.deep. The units of which it is composed are manufactured in enamelled steel, with cereal drawers of transparent plastic. A cooker and refrigerator are provided, it being assumed that hot water is obtained from a central source.

Dining Kitchen. (Flat)

This kitchen has been designed to meet the needs of a family of four to five people of low income class living in a flat. 73.4 per cent. of the total families of Great Britain come into this income group, and a large proportion of them will be housed in the new blocks of flats that are planned by Authorities in large towns. Hence this plan has been chosen for a family of two adults and two or three children.

The plan provides for a kitchen (measuring 12-ft.3-in.by 11-ft. 9-in.), a drying balcony, hall, bathroom and separate W.C.

Features worth noting in the kitchen are the new type of gas cooker with griller compartment incorporated in the oven, the unit furniture of timber, the mechanical extractor for the removal of steam and cooking odours and the gas refrigerator built-in at a convenient height. A gas-heated linen cupboard is fitted in the hall, while hot water is provided for the kitchen by a sink heater, and in the bathroom by a gas heater serving bath and wash-basin. The balcony screens the direct rays of the sun from the larder window which opens into it, and on the opposite side has a rubbish chute. Horizontal piping has been reduced to a minimum, and one central vertical duct takes the waste from bath, basin and W.C.

Kitchen-Bathroom-Unit.

This unit is planned for a flat housing a family of three to four people of middle income class. It comprises a hollow wall with built-in kitchen fitments on one side and bathroom fittings on the other; in the wall are housed all the waste pipes, cold supply pipes and gas and electric services. The idea of a central duct for plumbing service capable of being mass produced has thus been taken a stage further.

The wall unit is faced with anodized aluminium sheets, backed with cork for insulation against sound. The material used for the construction of the whole unit is a light but strong framework of aluminium alloy. Cooker, furniture and stores unit are also of aluminium, while the kitchen sink and work-table are of stainless steel; the bathroom wash-basin is of enamelled steel.

In the kitchen a space of a foot has been left between the floor and the bottom of the cooker and cupboards. Flush, easily cleaned surfaces and a long continuous work top make for labour-saving. The hot water supply comes from a multipoint gas water heater built in to the dividing wall; there is an access panel on the kitchen side. A recessed plate rack and recessed bathroom shelves are other features of the design.

The gas cooker is fitted with a large oven placed just below the work top, hot closet for warming plates and a special grilling compartment. Below it is a cupboard for pots and pans and next to it a built-in gas refrigerator.

The total length of the Unit is 12-ft.3-in.

Living-Room-Kitchen.

This is another plan for the low income group (i.e. 73.4 per cent. of the total families in Great Britain). It is designed for a family of four to five people living in a terrace house or a semi-detached house in town or country.

The design incorporates a dining annexe, kitchen and utility room, in an overall space of 24-ft.8-in. by 10-ft.9-in. The kitchen recess measures 6-ft.9-in. by 6-ft. and the utility room, which opens on to a tiled drying terrace, 8-ft.4-in. by 6-ft. A 4-ft.6-in.high partition divides dining annexe and kitchen, so that the mother of the family can keep an eye on the children while she is busy preparing the meals. On the living room side is a built-in seat providing seating along two sides of the dining table. The room is warmed by the coke boiler supplying hot water in winter; a gas fire is fitted for use on chilly days when the boiler is out of action. A glazed door opens into the garden.

The kitchen recess has on one side built-in cupboards, incorporating a refrigerator and a larder with sliding door; on the other two sides is a continuous working surface with cooker hotplate, sink and draining board all on the same level. The cooker is a new design with raised oven and plate warming cupboard and a sink water heater gives the kitchen an independent hot water supply in summer.

The utility room is finished in hard plaster, painted, with glazed asbestos splash-backs. The floor is covered with quarry tiles. The room is provided with a large sink, wash-boiler fitted underneath a removable draining board, a gas-heated drying cupboard and a work bench and space for storing tools.

A mechanical extractor fitted in the kitchen keeps the atmosphere free of cooking smells and steam.

All unit furniture is manufactured of timber.

Working Kitchen.

This kitchen is suitable for a universal "semi-detached" type of house for a family of four to five people of middle class income. Measuring 11-ft.10-in. by 15-ft. it provides space for the taking of breakfast or an occasional light meal, as well as for routine kitchen work.

The layout of the kitchen follows the normal sequence of work. By the side of the outside door is a delivery hatch for tradesmen which serves straight on to the work table. Lardor and built-in refrigerator are also close to the door for easy storage of foodstuffs. Provision for storage includes a long utensil cupboard, a drawer unit, a vegetable unit and two wall cupboards with glass doors.

Beneath the delivery hatch a continuous work top allows the housewife to sit at much of her work. A double sink, a garbage chute with removable containers and cupboards for cleaning materials are fitted on this side of the kitchen, as is also a cupboard housing a draw-out gas wash boiler. The cooker, which is continuous with the work top, has a raised oven. Between it and the coke boiler is a cupboard taking two coke hods.

The coke boiler, which is gas-ignited, works in conjunction with a gas circulator; when the boiler's heat is not wanted in summer, the circulator takes over the job of providing hot water. Next to the boiler is a gas-heated drying cabinet. Thus the equipment for heating, hot water and clothes drying is conveniently grouped together.

Unit furniture in this kitchen is of steel, with stainless steel sinks; timber is used for the work table and removable draining board.

The wall separating kitchen and dining room is fitted with a service hatch and a "two-way" crockery cupboard accessible from both rooms.

Kitchen for a Large House.

This kitchen is designed for a large house or for a household where much entertaining is done. It caters for a family of seven to eight people of high income class.

The plan assumes that domestic help will be available. The kitchen therefore incorporates a staff dining alcove.

The overall dimensions of the kitchen are 24-ft.9-in. by 13-ft. the dining recess measuring 6-ft.square.

Automatic gas-fired central heating and water heating plant for the whole dwelling is housed in a boiler room adjoining the kitchen. A separate laundry room is also envisaged.

One side of the kitchen itself is devoted to store cupboards and a large built-in refrigerator. On the window side is a long work table of stainless steel fitted with a sink for vegetable preparation. A double sink for washing up is provided in the servery adjoining. The gas cooker has two ovens, six boiling rings and a large grill. A pot rack stands next to it and both pieces of equipment are set below a glass partition which divides kitchen and servery. On the servery side this screen is fitted with shelves for glass and china. A ventilating duct with extract fan is fitted over the cooker.

Other features of this kitchen are the heated towel and teacloth rails, the venetian blinds with enamelled steel slats to the windows and the food preparation table of stainless steel, marble and teak.

The unit furniture is of anodized aluminium and cork back, the exterior finish being pale green with the interiors finished in the natural colours of the material.

OTHER EXHIBITS.

Prefabricated Hot Water Supply Unit.

The unit is designed for the requirements of a small house.

It consists of two components, the lower of which contains the coke boiler and a hot cylinder of 30-35 gallons capacity; in the upper component provision is made for a linen cupboard and cold water storage tank.

Each component corresponds with storey height and is built of light steel sections clad with ½" Kimoloboard. Brackets for the support of normal floor constructions can, as shewn, be secured to all four uprights, allowing for varying heights of floor construction. Each upright is capable of supporting 130 square feet of normal floor construction; thus no weight-carrying partitions will be required.

A gas circulator in the lower component provides for hot water supply during the warm season.

The model of a pair of small semi-detached houses shows the application of the unit in its various functions. Note the wide porches and the provision for refuse bin and delivery and storage of fuel.

The unit has been designed by Walter Segal for the London and Counties Coke Association.

Prefabricated Plumbing Unit.

The various designs of factory-produced plumbing and heating systems invented in 1943 have now been further developed. The unit shown has been extended to serve a lavatory basin in an adjoining bedroom and an additional sink in the utility room. A gas water heating unit is now included, as well as all necessary piping, gas supply pipes and connections.

The whole unit is assembled in the factory, all the components being fitted into the light steel mast. On the site the minimum of connections needs to be made.

The unit is designed for simple, indeed fool-proof, assembly, at the same time ensuring rapid construction in the factory and installation on the site.

The "one-pipe" system is a feature of the design and the main water pipe is fitted internally, allowing for easy access to the system and obviating risk of frost.

Modern Gas Equipment on view includes a post-war type of horizontal cooker with raised oven and the new Convector Gas Fire which has been installed in the houses equipped by the Gas Industry on the Ministry of Works Demonstration Housing Estate, Northolt, Middlesex.

Murals designed by John Armstrong and F.H.J. Henrion.

Colour Schemes for Kitchens by John Armstrong.

KITCHEN PLANNING EXHIBITION.
DORLAND HALL, W.1

Manufacturers Co-operating.

The LINOLEUM used throughout the Exhibition is supplied by members of the Linoleum & Floorcloth Manufacturers Association, Old Bailey, E.C.

The LIGHTING FITTINGS by Troughton & Young Ltd., Imperial Court, Basil Street, S.W.3.

The GLASS (for windows, doors, etc.) and MIRRORS by Pilkington Bros.,Ltd., 63 Piccadilly, W.1.

The FURNITURE by Bowman Bros., Camden Town, N.W.1.

The CLOCKS by Smiths English Clocks Ltd., Cricklewood Works, Edgware Road, N.W.2.

The KITCHEN UTENSILS by Steines Kitchen Equipment Co.,Ltd., Victoria Street, S.W.1

The PYREX COOKING WARE by Jas.Jobling & Co.,Ltd., Sunderland.

COOKING WARE, DECORATED POTTERY and UTENSILS by the following:-

The Wrought Light Alloys Development Association, Union Chambers, 63 Temple Row, Birmingham.
The Worcester Royal Porcelain Co.,Ltd., Worcester.
Radiation Ltd., 7 Stratford Place, W.1
Joseph Bourne & Son Ltd., Denby Pottery, nr.Derby.
C.H.Brannam Ltd., Litchdon Pottery, Barnstaple, Devon.
T.G.Green & Co.Ltd., Church Gresley Potteries, nr.Burton-on-Trent.
Alumilite & Alzac Ltd., 40 Brook Street, W.1
Acorn Products Ltd., Carlisle Road, N.W.9
Garton & Thorne, 44 St.Paul's Road, N.W.1.
London Aluminium Company, Westwood Rd., Witton, Birmingham 6.
Heal & Son Ltd., 194/199 Tottenham Court Road, London, W.1

PREFABRICATED PLUMBING UNIT.

"Denam" Plumbing Unit, including bath, basin, W.C., taps, &c.	W.N.Froy & Sons Ltd., Brunswick Works, Hammersmith.
Copper tubes.	Copper Development Assoc., Grand Buildings, S.W.1
Gas Cooker and Water Heater.	Society of British Gas Industries (Wartime address) Uplands, Epsom Rd.Guildford.
Washing Machine.	Barker & Turner Ltd., Grena Works, Richmond, Surrey.
Sink.	Stainless Steel Sink Co.Ltd. 14 Gt.Peter St., S.W.1
Windows.	British Metal Window Manufacturers Assoc., 21 Tothill St., S.W.1
Blinds.	Joseph Avery & Co., 81 Gt.Portland St., W.1

PREFABRICATED HOT WATER SUPPLY UNIT (in stair well between gallery and ground floor).

Unit designed by	London & Counties Coke Assoc., 1 Grosvenor Place, S.W.1
Unit and Coke Boiler.	Crane Ltd., 45 Leman St., E.1
Kimoloboard.	Cellactite & British Uralite Ltd., 52 Grosvenor Gardens, S.W.1
Gas Circulator.	Society of British Gas Industries. (Wartime address) Uplands, Epsom Road, Guildford.
Bath and lavatory basin.	Doulton & Co.Ltd., Albert Embankment, Lambeth, S.E.1

SHOWCASE, MAIN HALL.

Gas Convector Fire, Silent Beam Fire, Portable Heater: Storage, Multi-point and Sink Water Heaters: Large and medium size floor model Refrigerators: A post-war type eye-level cooker.	Society of British Gas Industries. (Wartime address) Uplands, Epsom Rd. Guildford.

COMBINED KITCHEN UNITS (No.1a).

Kitchen dipboard units, work-table, splashboard, cutlery drawer, &c.	English Joinery Manufacturers Association, 40 Piccadilly, W.1
Gas Cooker.	Society of British Gas Industries. (Wartime address) Uplands, Epsom Rd. Guildford.
Plastic tops and handles for kitchen units.	British Plastics Federation, 47/48 Piccadilly, W.1
Sink and draining board.	Wallis & Co.(Long Eaton) Ltd., Long Eaton, Notts.
Taps.	W.N.Froy & Sons, Brunswick Works, Hammersmith, W.6.
Plate rack.	Staines Kitchen Equipment Co. Ltd., 94 Victoria St. S.W.1

COMBINED KITCHEN UNITS (No. 1b)

Kitchen units and wooden fitments.	English Joinery Manufacturers Assoc., 40 Piccadilly, W.1
Gas Cooker and Refrigerator.	Society of British Gas Industries. (Wartime address) Uplands, Epsom Rd., Guildford.
Enemalled Steel Handles.	A.J.Binns Ltd., 53 Gt.Marlborough St., W.1
Vegetable trays.	Sankey-Sheldon, Stroud Court, Eynsham, nr.Oxford.

COMBINED KITCHEN UNITS (No. 1c)

Kitchen Units with wooden fitments.	English Joinery Manufacturers Assen., 40 Piccadilly, W.1
Gas Cooker.	Society of British Gas Industries, (Wartime address) Uplands, Epsom Road, Guildford.
Handles.	A.J.Binns Ltd., 53 Great Marlborough Street, W.1

SMALL PACKAGE KITCHEN.

Package Kitchen in "Alupiex"	Cen, Trup & Co.Ltd., Park View Rd. Tottenham, N.17. (Chief sub-contractor).
Aluminium.	Northern Aluminium Co.Ltd., Grosvenor House, Park Lane, W.1
Anodising.	Alumilite & Alzac Ltd., 40 Brook Street, W.1
Cooker, Refrigerator and Sink Heater.	Society of British Gas Industries, (Wartime address) Uplands, Epsom Road, Guildford.
Enamalled Sink.	Wallis & Co. (Long Eaton) Ltd., Long Eaton, Notts.
Plumbing.	Dent & Hellyer Sanitation Ltd., Kingsway House, Kingsway, W.C.2.

LARGE PACKAGE KITCHEN.

Package Kitchen.	Sankey-Sheldon Ltd., Stroud Court, Eynsham, nr.Oxford. (Chief sub-contractor).
Cooker and Refrigerator.	Society of British Gas Industries, (Wartime address), Uplands, Epsom Road, Guildford.
Cereal Drawers.	British Plastics Federation, 47/48 Piccadilly, W.1.

DINING-KITCHEN (FLAT)

Kitchen units and fitments, worktable, etc.	Easiwork Ltd., Woodstock Grove, Shepherds Bush, W.12 (Chief sub-contractor).
Gas Cooker, Refrigerator, Fire, Sink Water Heater, Multi-point Water Heater & Wash Boiler.	Society of British Gas Industries, (Wartime address), Uplands, Epsom Road, Guildford.
Plastic Handles.	British Plastics Federation, 47/48 Piccadilly, W.1
Enamalled Steel Handles.	A.J.Binns Ltd., Gt.Marlborough Street, W.1
Wringer.	Acme Wringers Ltd., David Street, Glasgow.

Plate Rack.	Staines Kitchen Equipment Co.Ltd., Victoria Street, S.W.1.
Sanitary fittings, bath, lavatory basin, &c.	W.N.Froy & Sons Ltd., Brunswick Works, Hammersmith, W.6.
Extract Fan.	Vent Axia Ltd., 9 Victoria Street, S.W.1
Gas and Electric Meters.	Smith Meters Ltd., 186 Kennington Park Road, S.E.11.
Windows.	British Metal Window Manufacturers Assen., 21 Tothill Street, S.W.1
Blinds.	Joseph Avery & Co., 81 Gt.Portland Street, W.1

KITCHEN-BATHROOM UNIT.

Wall and Kitchen fitments and Trend Cooker in "Aluplex"	Cen, Trup & Co.,Ltd., Park View Road, Tottenham, N.17. (Chief sub-contractor).
Aluminium.	Northern Aluminium Co.,Ltd., Grosvenor House, Park Lane, W.1.
Anodising.	Alumilite & Alzac Ltd., 40 Brook Street, W.1
Sink, Draining Board and Wash Basin.	Wallis & Co. (Long Eaton) Ltd., Long Eaton, Notts.
Plumbing with connection and taps, bath, W.C., &c.	Dent & Hellyer Sanitation Ltd., Kingsway House, Kingsway, W.C.2
Gas Cooker, Refrigerator and Multi-point Water Heater.	Society of British Gas Industries, (Wartime address) Uplands, Epsom Road, Guildford.
Floor Covering.	British Plastics Federation, 47/48 Piccadilly, W.1

LIVING-ROOM-KITCHEN.

Kitchen fitments, table and built-in seat.	Kandya Ltd., Silverdale Road, Hayes, Middx. (Chief sub-contractor)
Gas Cooker, Refrigerator, Sink Water Heater, Wash Boiler, Portable Heater & Coke Boiler.	Society of British Gas Industries, (Wartime address) Uplands, Epsom Road, Guildford.
Enemalled steel handles.	A.J.Binns Ltd., 53 Gt.Marlborough Street, W.1
Gas-heated Drying Cabinet.	J.Glover & Sons Ltd., Groton Rd., Earlsfield, S.W.18
Extract Fan.	Vent Axia Ltd., 9 Victoria Street, S.W.1

Enemelled steel sink.	Wallis & Co. (Long Eaton) Ltd., Long Eaton, Notts.
Earthenware Sink.	W.N.Froy & Sons Ltd., Brunswick Works, Hammersmith, W.6
Plate Rack.	Staines Kitchen Equipment Co.Ltd., Victoria Street, S.W.1
Windows and doors.	English Joinery Manufacturers Assen., 40 Piccadilly, W.1
Metal window.	British Metal Window Manufacturers Assen., 21 Tothill St., S.W.1
Curtain Rods.	British Plastics Federation, 47/48 Piccadilly, W.1
Curtains and Blinds.	Joseph Avery & Co., 81 Gt.Portland Street, W.1
Glazed Asbestos Sheets.	Turners Asbestos Cement Co.Ltd., Asbestos House, Southwark St. S.E.1

WORKING KITCHEN.

Steel Kitchen fitments and trolley table.	Sankey-Sheldon, Stroud Court, Eynsham, nr.Oxford. (Chief sub-contractor).
Gas Cooker, Refrigerator, Circulator, Wash Boiler, Drying Cabinet.	Society of British Gas Industries, (Wartime address) Uplands, Epsom Road, Guildford.
Wooden fitments (sideboard, tables, draining board, &c.)	Kandya Ltd., Silvordale Road, Hayes, Middx.
Table Tops and curtain rods.	British Plastics Federation, 47/48 Piccadilly, W.1
Coke Boiler.	Beeston Boiler Co.Ltd., Beeston, nr.Nottingham.
Steel Sinks.	Stainless Steel Sink Co.Ltd., 14 Gt.Poter Street, S.W.1
Plumbing.	Dent & Hollyer Sanitation Ltd., Kingsway House, Kingsway, W.C.2
Wringer.	Acme Wringers Ltd., David Street, Glasgow.
Plate Rack and Coke Container.	Staines Kitchen Equipment Co.Ltd. Victoria Street, S.W.1
Extract Fan.	Vent Axia Ltd., 9 Victoria Street, S.W.1
Metal Window.	British Metal Window Manufacturers Assen., 21 Tothill St. S.W.1
Blinds.	Joseph Avery & Co. 81 Gt.Portland Street, W.1

KITCHEN FOR A LARGE HOUSE.

Kitchen Fitments in "Aluplex"	Con. Trup & Co.Ltd., Park View Road, Tottenham, N.17 (Chief sub-contractor).
Aluminium.	Northern Aluminium Co.Ltd., Grosvenor House, Park Lane, W.1
Anodising.	Alumilite & Alzac Ltd., 40 Brook Street, W.1
Gas Cooker, Refrigerator, Storage Water Heater, Central Heating Boiler.	Society of British Gas Industries, (Wartime address) Uplands, Epsom Road, Guildford.
Gas-Heated Drying Cabinet.	J.Glover & Sons Ltd., Groton Rd. Earlsfield, S.W.18
Table tops, plate racks, serving hatch, cereal drawers and curtain rods.	British Plastics Federation Ltd., 47/48 Piccadilly, W.1
Stainless steel sinks and splashboards.	Stainless Steel Sink Co.Ltd., 14 Gt.Peter Street, S.W.1
Plumbing.	Dent & Hellyer Sanitation Ltd., Kingsway House, Kingsway, W.C.2
Metal Windows and Screen Frames.	British Metal Window Manufacturers Assoc., 21 Tothill St. S.W.1
Cork Tiles in staff dining recess.	Armstrong Cork Co.Ltd., Kingsbury.
Curtains and Blinds.	Joseph Avery & Co.Ltd., 81 Gt.Portland Street, W.1

UNIT FURNITURE DISPLAY.

Units.	English Joinery Manufacturers Assoc., 40 Piccadilly, W.1
Handles.	A.J.Binns & Co.Ltd., 53 Gt.Marlborough Street, W.1