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STORAGE COOKER AND THE LIKE

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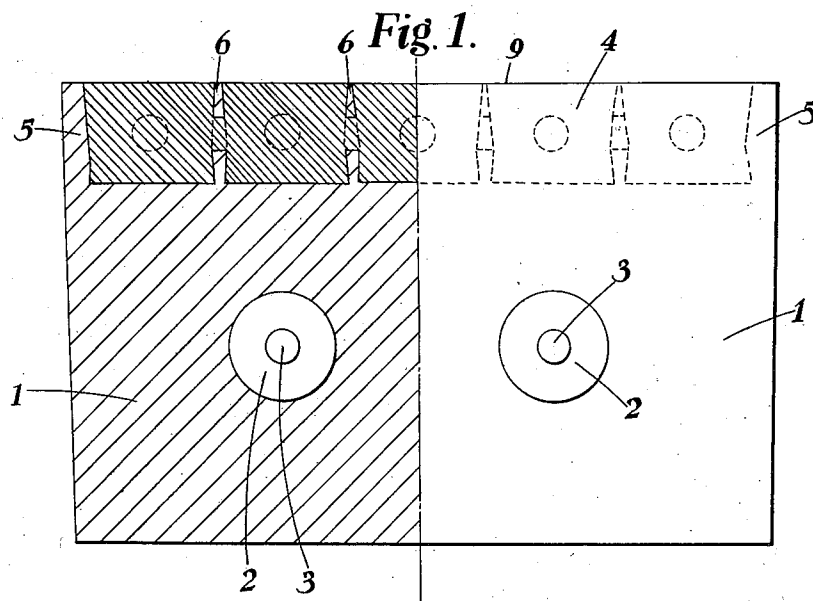
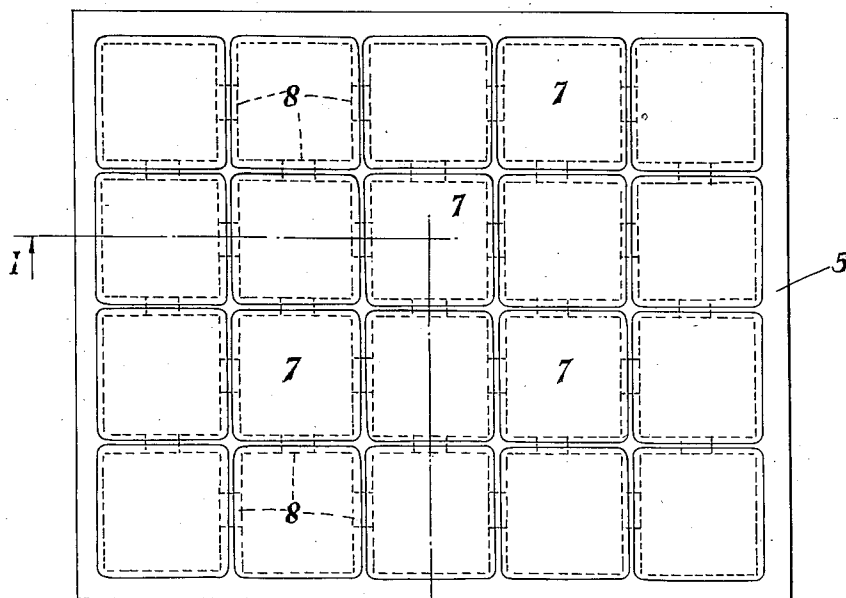


Fig. 2.



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STORAGE COOKER AND THE LIKE

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5 Claims. (Cl. 126—211)

This invention relates to storage cookers and the like in which heat for cooking, boiling, etc., is stored in a metal block. Such blocks are usually provided with a surface or surfaces (hereinafter called working surfaces) upon which cooking or the like utensils can be placed for heating, the amount of heat supplied to the utensil being dependent upon the area of the utensil in contact with such a working surface.

When a small area of the utensil is arranged to be in contact with the working surface as for a simmering or other low heat operation, or when the utensil is itself small, a large area of the working surface is exposed to the atmosphere and heat is wasted. The block has usually been made of cast iron or some other cheap and workable metal; the thermal emissivity of these metals is high, and the heat wasted is correspondingly appreciable. The object of the invention is to provide a storage block which, although not appreciably more expensive than the usual form of block, has the advantage that radiant heat from the working surface is very much reduced.

This object can be attained, of course, by covering the working surface of cast iron with material of low thermal emissivity. Aluminium is known to be such a material, and some improvement might be obtained by painting the surface with aluminium paint. But a thin layer of the character thus produced would soon wear away. If a thick layer were employed, such as aluminium plate screwed to the cast iron block, difficulty would arise on account of the difference between the thermal expansions of iron and aluminium; moreover aluminium is relatively weak and would distort if it were not very firmly supported.

Accordingly, in the present invention, the main body of the storage block comprises a part formed of metal such as cast iron having a relatively high thermal emissivity which is provided with a working surface almost wholly of metal such as aluminum having a relatively low thermal emissivity, the aluminum or like metal forming the larger portion of the working surface being preferably cast or set into recesses formed in the top of the cast iron part of the storage block and preferably held therein by suitable interlocking keys or projecting parts.

One embodiment of the invention will now be described, by way of example, with reference to the accompanying drawing of which Figure 1 shows a part-section on the line I—I of Fig-

ure 2 and Figure 2 shows a plan view of a storage block embodying the invention.

The main part of the storage block comprises the body 1 of cast iron. It has the usual hollows 2 in which are inserted heating elements 3. The upper surface 4, which would normally be the working surface, is formed as a grid by rectangular partitions with an upstanding flange 5 extending round the whole edge of the block and thin partition walls 6 separating the surface within the edge flange into a plurality of recesses or cells 7. The walls 6 of the recesses or cells may be about one or two inches high. Each of these walls 6 is preferably pierced by a hole 8. Into the recesses or cells of this grid there is poured molten aluminum so that the cells 7 and the holes 8 are filled with the metal. The top of the block is then machined flat, so that there results a working surface 9 composed mainly of aluminum, but broken by a criss-cross of iron, namely the exposed tops of the walls 6. The cast-iron walls 6 by extending through the aluminum surface prevent it from being so readily worn away in use, thus making the working surface generally much stronger and more enduring than it would be if it consisted of aluminum alone.

In this example the recess walls 6 are shown in the drawing as bulging at their centers and the keys which attach the two metals are constituted by the bulging walls as well as by the rod-like portions of aluminum passing through the holes 8 in the walls 6 and connecting together the cast aluminum blocks 7. In some cases it may be sufficient to make the recess walls 6 plain and parallel and depend entirely on the rod-like connections passing through the holes 8 to form the keys. Furthermore, the bulging walls may be sufficient in some cases and then the holes 8 and the rod-like connections may be dispensed with.

I claim:—

1. A storage cooker comprising a part constituting the main heat storage block formed of metal of relatively high thermal emissivity, a cooperating working surface part formed of metal of relatively low thermal emissivity and interlocking means adapted to maintain the working surface part in prearranged relation to the storage block part at all normal operating temperatures.

2. A storage cooker comprising a part constituting the main heat storage block formed of metal of relatively high thermal emissivity, a

cooperating working surface part formed of metal of relatively low thermal emissivity and mutually engaging key portions between the two metal parts for retaining the working surface part in prearranged relation to the storage block part at all normal operating temperatures.

5 3. A storage cooker comprising a cast iron part constituting the main heat storage block, a cooperating working surface part of cast
10 aluminum and means effected therebetween for maintaining the working surface part in prearranged relation to the main storage block part at all normal operating temperatures.

15 4. A storage cooker comprising a cast iron part constituting the main heat storage block provided on its working face with a plurality of recesses separated by grid-like walls, a working

surface part comprising a plurality of cast aluminum elements in said recesses and means cooperating between the aluminum elements and the walls of the recesses for maintaining said elements in prearranged relation to the storage block part at all normal operating temperatures.

5 5. A storage cooker comprising a cast iron part constituting the main heat storage block, a working surface part in thermal conducting relation to said heat storage part comprising a
10 plurality of cast aluminum elements and mutually cooperating key portions for retaining the aluminum elements in prearranged relation to the iron part at all normal operating temperatures.

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