

S. McCLURE.
COMBINATION COAL AND GAS RANGE.
APPLICATION FILED JAN. 13, 1921.

1,400,558.

Patented Dec. 20, 1921.

4 SHEETS—SHEET 1.

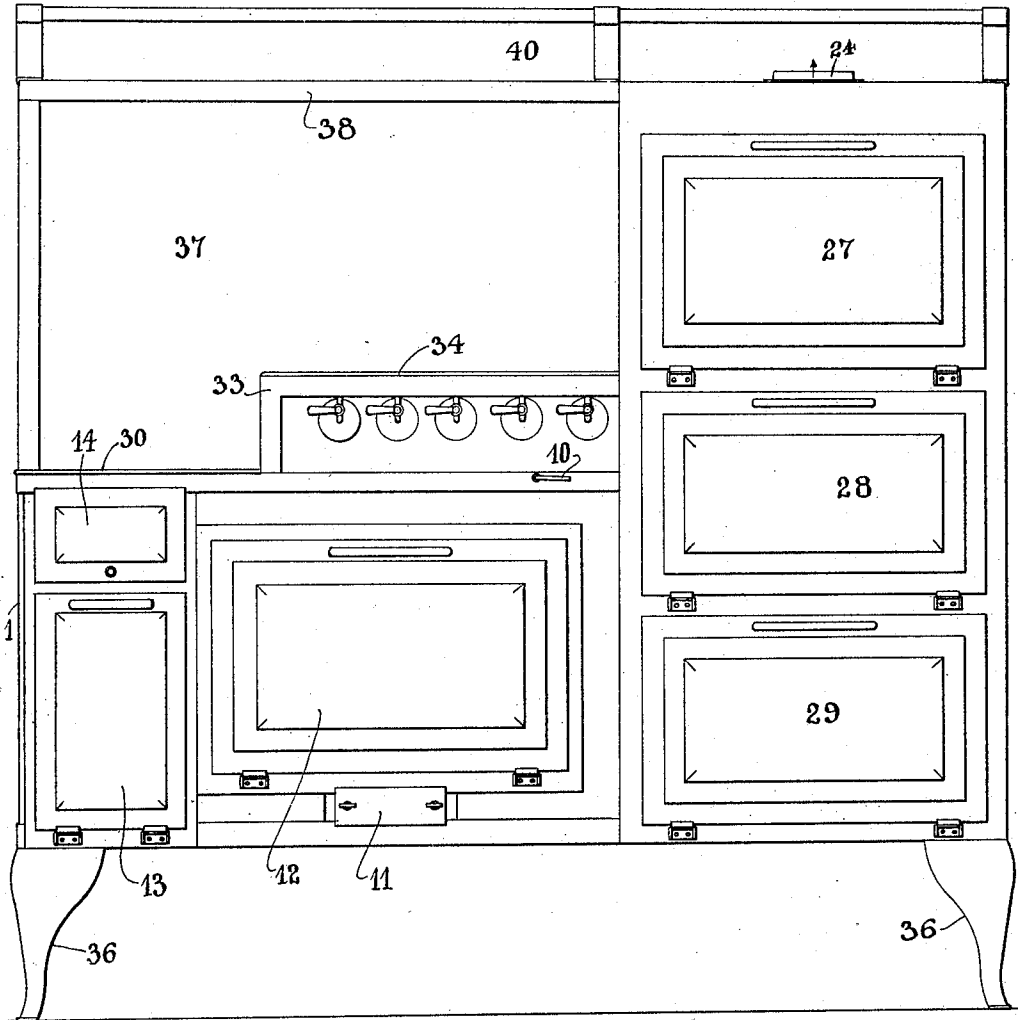


Fig. 1.

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By his Attorneys
Rennie Davis, Martin & Edmond

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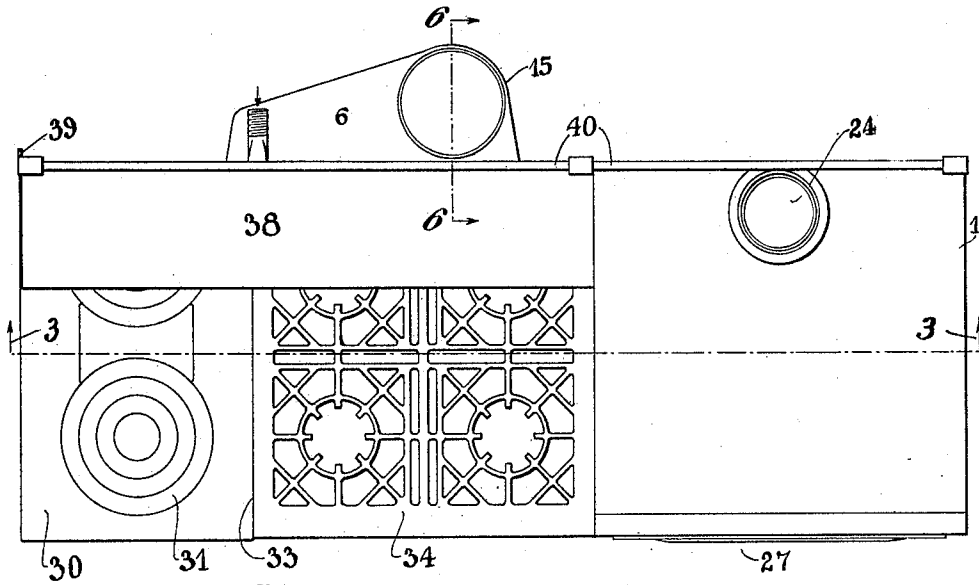


Fig. 2.

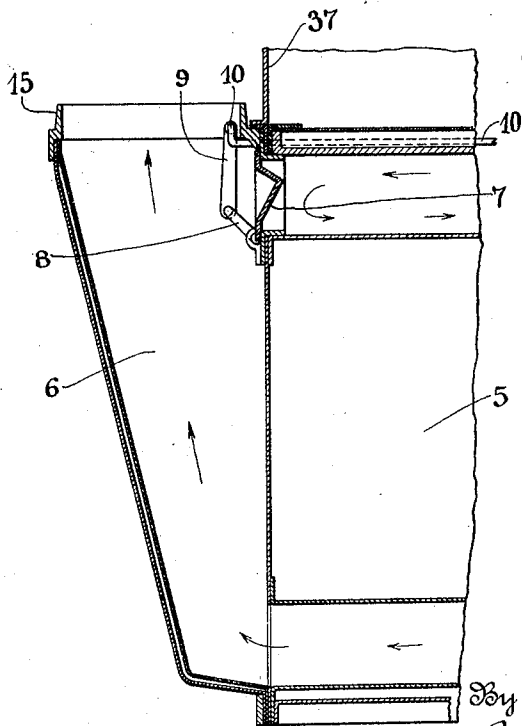


Fig. 6.

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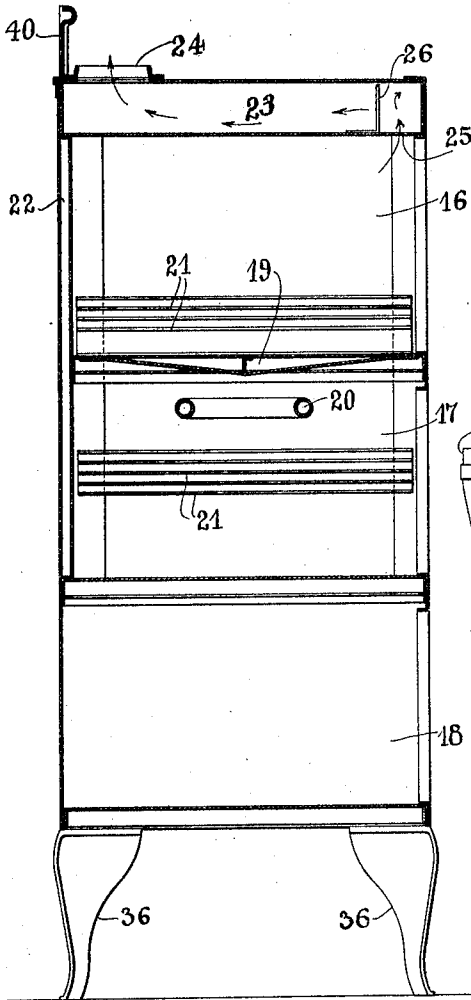


Fig. 4.

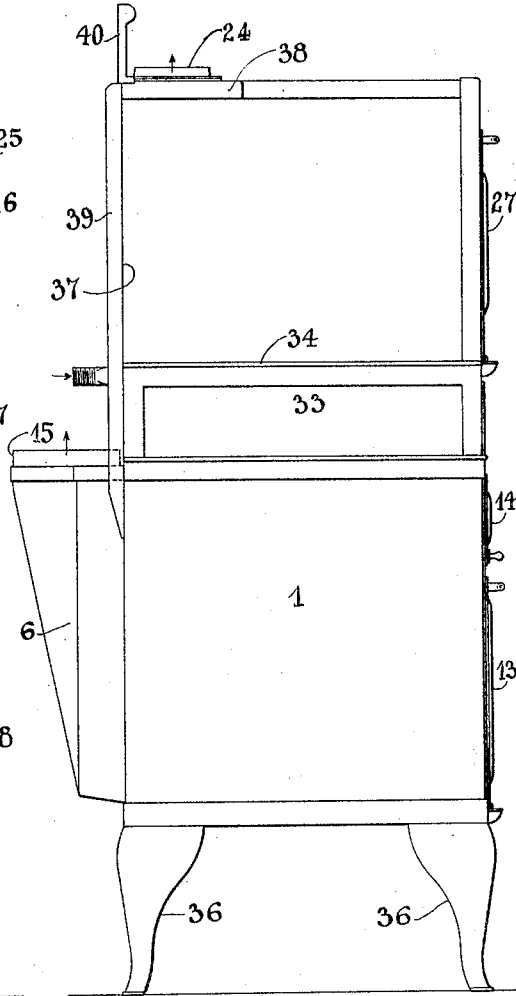


Fig. 5.

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UNITED STATES PATENT OFFICE.

SILAS McCLURE, OF BEAVER DAM, WISCONSIN.

COMBINATION COAL AND GAS RANGE.

1,400,558.

Specification of Letters Patent. Patented Dec. 20, 1921.

Application filed January 13, 1921. Serial No. 433,891.

To all whom it may concern:

Be it known that I, SILAS McCLURE, a citizen of the United States, residing at Beaver Dam, in the county of Dodge, State of Wisconsin, have invented certain new and useful Improvements in Combination Coal and Gas Ranges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention pertains to cooking ranges, in one part of which gas may be used as the fuel, and in another part of which coal, wood or other solid fuel may be used.

It is an object of the present invention to provide, in the combined stove, a gas heated unit that will give as ready, satisfactory and economical service as an ordinary gas range of the most advanced standard type, and to combine with this a structure or unit for the use of coal (or equivalent solid fuel) that will compare as favorably with a standard type of coal range. It is a further object to so position the several parts that they will be convenient for use; to avoid every form of complication in the operation of any of the parts; to avoid the inclusion of unnecessary elements; to economize in space in the kitchen with over-all dimensions for the combined range such that it will pass easily through standard doorways; to lessen the cost of manufacture of combined ranges, and to provide for the ready replacement of any part that may be damaged by accident or use.

Broadly considered, my combined range may be said to include in a single structure of compact design a coal-burning range of standard construction placed at the side of a gas-burning range of standard construction, but with the cooking plate of the gas range superimposed over a part of the cooking top of the coal range to economize in cost and in kitchen space. The flues of the coal range are of standard dimensions, are positioned in the normal manner, and are unobstructed by pipes or adjuncts of the gas range. Similarly, the oven of the gas range is the usual elevated oven with a broiler beneath, being lined with thin sheet metal as is usual in gas heated ovens, and its burners and flues being of the most improved construction in gas stove practice. These advantageous results are attained at the ex-

pense of covering up and thereby rendering useless one-half or more of the normal cooking top of the coal range. But I have found by testing coal-burning ranges of standard design that the real cooking service is performed on the first twelve inches over the fire-box and the stove top back of this well used area gives but limited and inefficient cooking power and is used only for slow work. There is a rapid falling off in the cooking efficiency toward the middle and back end of a coal range top. A top over the coal fire-box wider than that herein provided does not therefore justify the additional space and expense that would be necessary in keeping all of it available for use. This fact justifies me in so consolidating the combination that the coal-using structure or unit is in effect telescoped into the gas-burning unit by a distance equal to the length of the gas cooking top, the whole structure being carried on four legs and being built together as a single combined range.

The length of the range from right to left may be under fifty inches, and the depth from front to back not exceeding twenty-eight inches, so that the total space occupied by the combined range is no greater than the smallest form of combined ranges now in common use. The length is greater but the depth is less, and there are few kitchens in which space measured from the wall to the center of the room is not of greater value than space parallel to the wall.

Other objects and advantages of the invention will become clear from the following description taken in conjunction with the accompanying drawings, wherein—

Figure 1 is a front elevation of the improved range;

Fig. 2 is a top plan view;

Figs. 3 and 6 are sections on the lines 3—3 and 6—6, respectively, of Fig. 2;

Fig. 4 is a section on the line 4—4 of Fig. 3;

Fig. 5 is an end elevation; and

Fig. 6 is a section on the line 6—6 of Fig. 2.

Adjacent to the left hand end wall 1 of the combined range is a coal-burning grate 2 with a combustion chamber 3 above and an ash pit 4 beneath. Adjacent to the combustion chamber and ash pit is an oven 5 of standard construction having an unobstructed encircling flue as usual, leading to a back flue 6. A damper 7 controlled by a

crank 8, link 9 and actuating bar 10 controls passage of the products of combustion either directly into back flue 6 or by the more circuitous path around the oven, as is usual in coal heated ranges. The range has on its front a clean-out door 11, an oven door 12, an ash pit door 13, and a draft door 14, all proportioned and positioned as in standard coal range practice. The back flue 6 has the usual collar 15 for receiving a stovepipe to connect with the chimney. In its broader aspects, the structure just described may be regarded as a complete coal-heated cooking range of usual design with all the parts in their normal relation and with all flues and passages normally positioned and wholly unobstructed. The oven walls may be of cast iron and heavy.

Combined with the coal-burning structure or unit above described is a gas-burning structure or unit comprising an oven 16, a broiler 17, and a storage closet 18, positioned one above another, as shown in Fig. 3, so that oven 16 and broiler 17 will be in the elevated positions recognized as being most convenient both by the makers of modern gas stoves and by users of those stoves. Below oven 16 is a baffle plate 19 and a gas burner 20. The oven and broiler have grid racks 21, dead air jackets 22, and circulating flues 23 and 24, all in conformity with modern gas stove practice. A baffle 26 may be positioned in flue 23 between the inlet 25 of that flue and its outlet 24. This baffle plate extends about one-half the width of flue 23 and causes the heated gas to follow a tortuous course from the inlet 25 to the outlet 24. Oven 16 and the two chambers beneath are provided respectively with front doors 27, 28 and 29 (Fig. 1).

Just above the fire box 3 of the coal range is a cooking top 30 with griddles 31. Back of the cooking surface thus provided the stove top 32 comprises a pair of interlocking sections. These sections are ribbed (Fig. 3) to form a dead air space beneath the superimposed sheet steel bottom of the gas burner box 33. Above the gas burner box 33 is a grid 34 forming the cooking top of the gas range. Gas burners are provided in usual manner beneath grid 34, and their control valves as well as that for the oven and boiler are positioned as shown in Fig. 1 immediately above the oven door of the coal range. At the extreme right hand edge of the coal-burning unit there is a clean-out opening 35 giving access to the back vertical flue, as shown in Fig. 3.

The combined range as above described is adequately fastened together and is sup-

ported in its entirety on four legs 36. There is a sheet steel splash back 37 arranged at the rear of the two cooking tops, and above this is a shelf 38 carried on end brackets 39 and surmounted by a mantle back 40.

With the above arrangement there is provided a stove or range having means for utilizing either solid or gaseous fuel for baking or for cooking, usable either alternately or simultaneously, wherein the oven of the coal range may be of the muffle type in conformity with the best coal range practice, and wherein the oven of the gas range may have open walls in conformity with the best gas range practice, and wherein both cooking tops, both ovens and the broiler are at or near heights to which stove users have become accustomed, all of this having been attained cheaply and effectively without sacrifice other than that of covering up and rendering unusable that part of the coal-heated cooking top which normally has but little cooking power.

I claim:—

1. In a combined coal and gas range, the combination with a coal heated unit having an oven and flues of usual proportions and arrangement but a restricted cooking top, of a gas heated unit having a cooking top, an elevated oven and a broiler beneath said oven, said gas heated cooking top being positioned at the side and above the level of the restricted coal heated cooking top, substantially as described.

2. In a combined coal and gas range, the combination with a coal heated unit having a muffle type oven through which products of combustion never pass, said oven having flues of usual proportions and arrangement, said coal heated unit having a restricted cooking top, of a gas heated unit having a cooking top and an elevated oven, the gas heated cooking top being positioned at the side and above the level of the restricted coal heated cooking top and being insulated from the oven flue beneath.

3. In a combined coal and gas range, the combination with a coal heated unit having an oven and flues of usual proportions and arrangement but a restricted cooking top, of a gas heated unit having a cooking top, an elevated oven and a broiler beneath said oven, the heated cooking top having its burner box positioned at the side of the restricted coal heated cooking top and insulated from the adjacent oven flue by a dead air chamber, substantially as described.

In testimony whereof I affix my signature.

SILAS McCLURE.