July 10, 1951 A. A. DANIELSEN 2,559,710

STOVE GRILL

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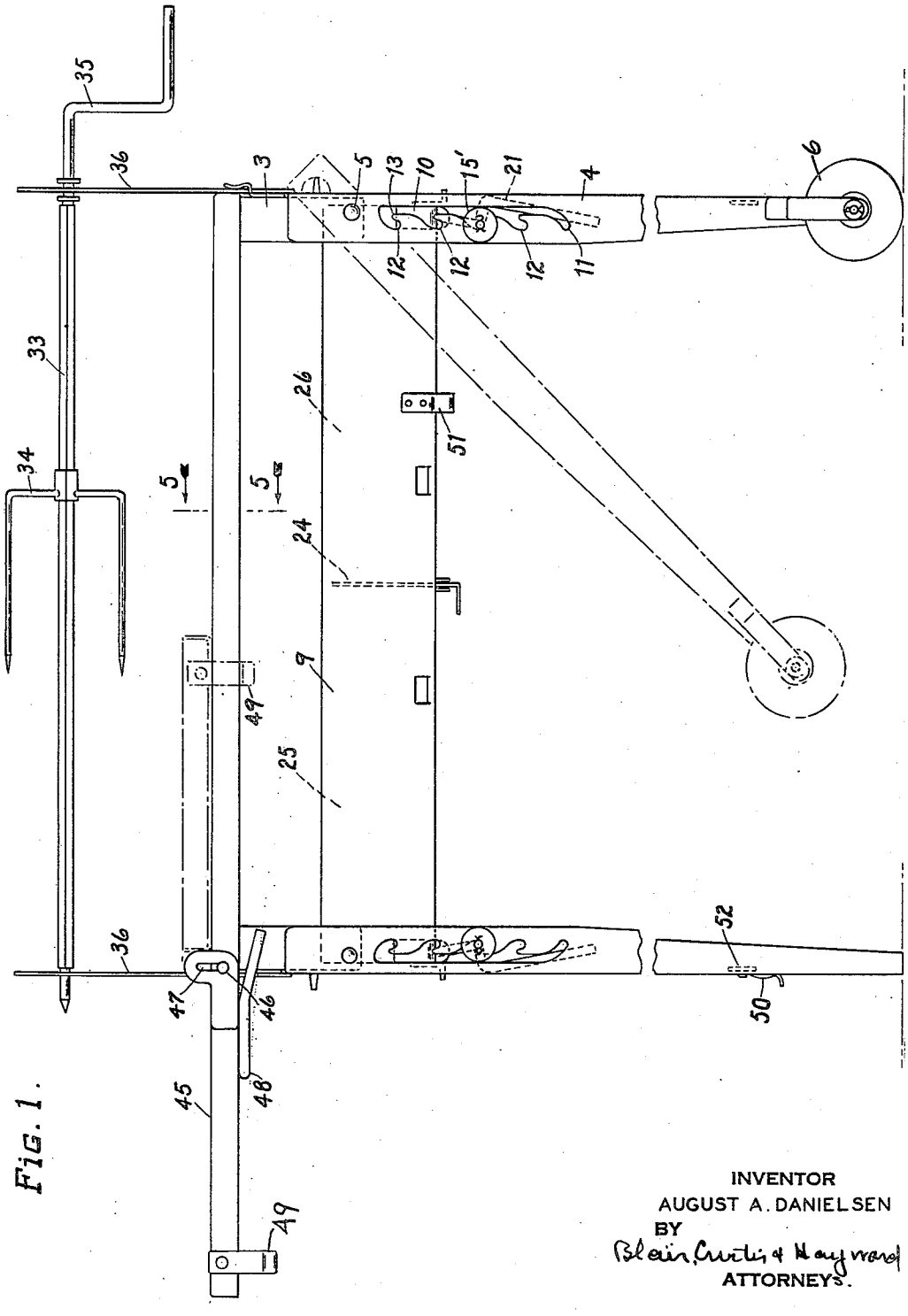


Fig. 1.

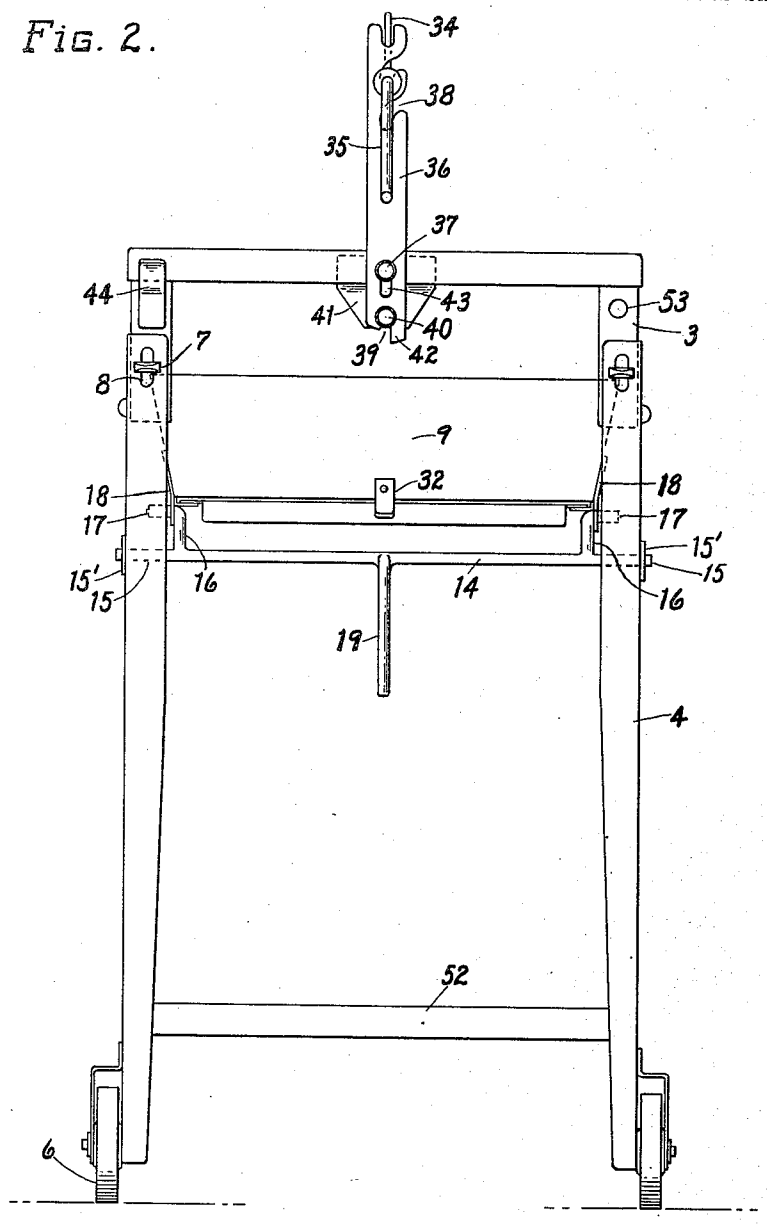
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Fig. 2.



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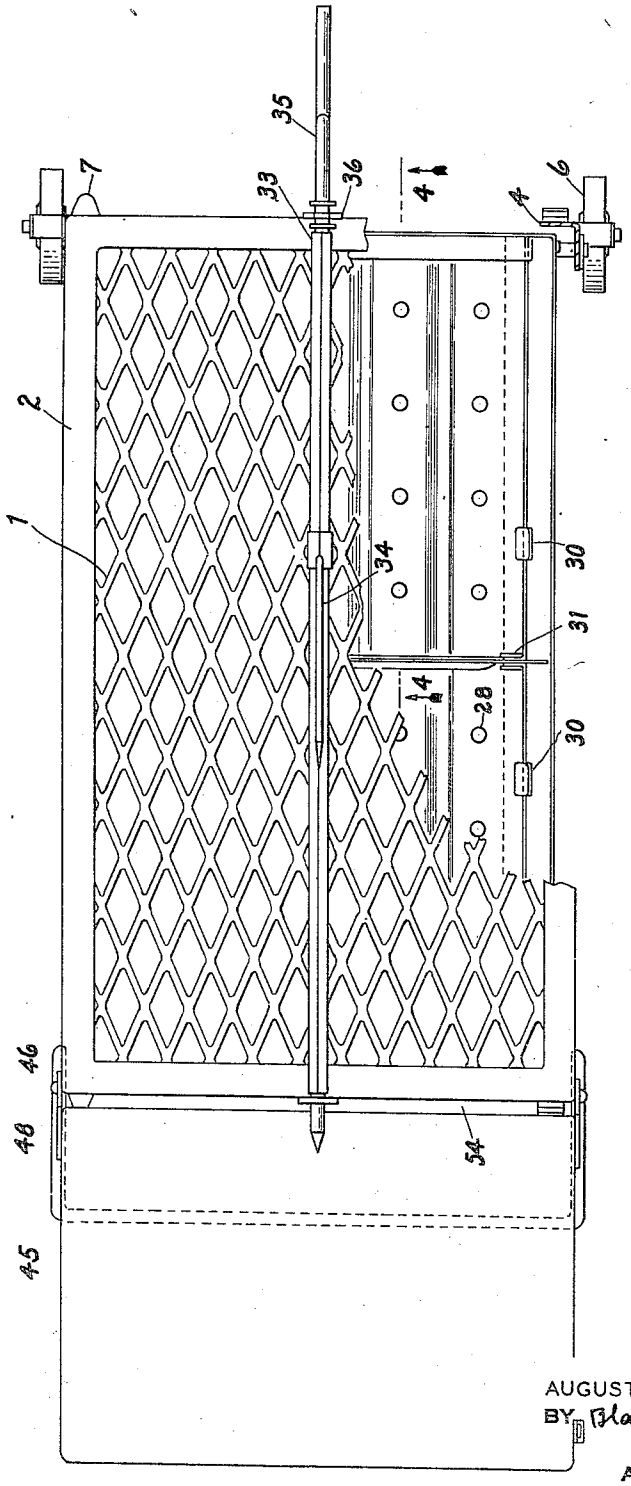


Fig. 3.

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Fig. 4.

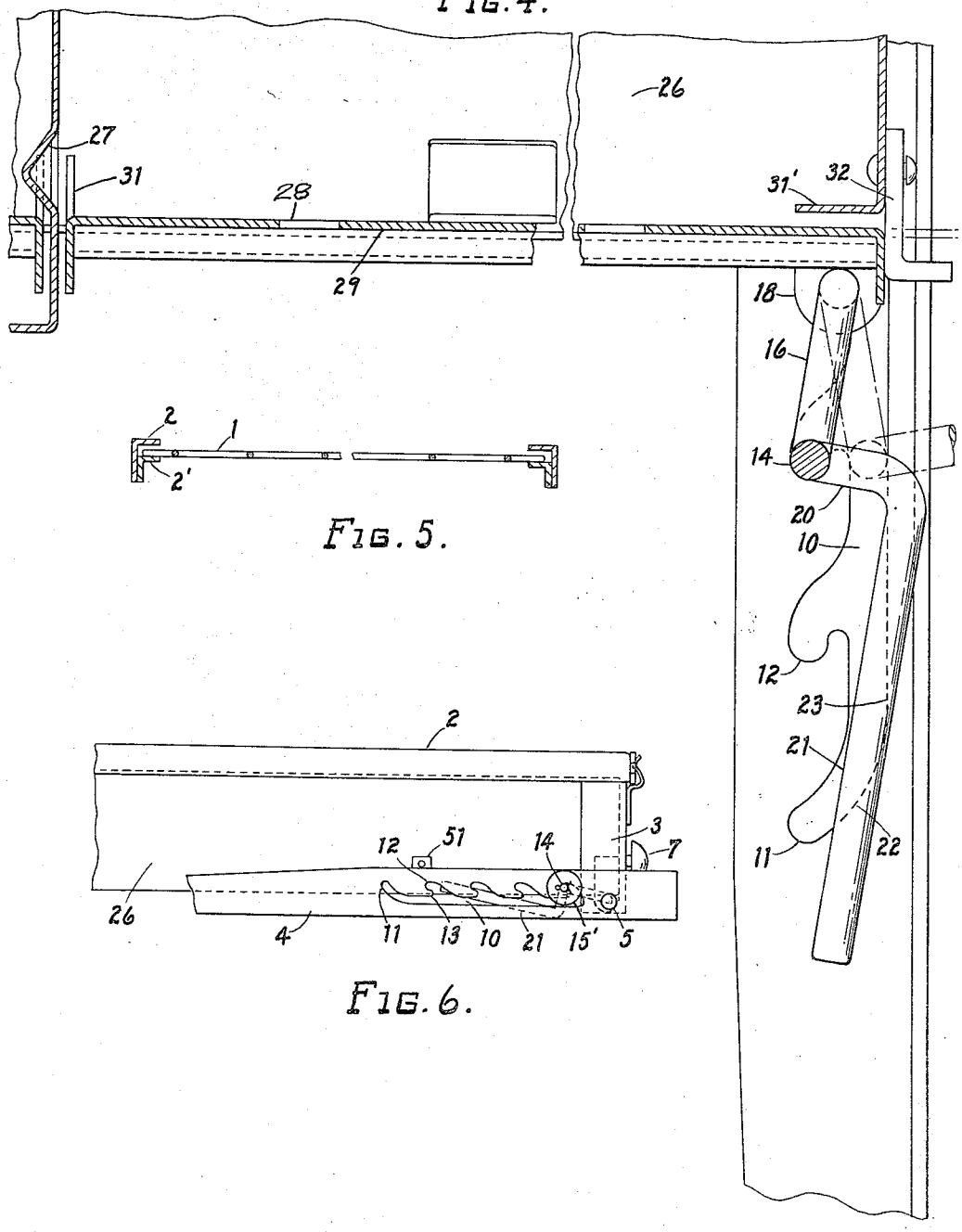


Fig. 5.

Fig. 6.

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STOVE GRILL

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3 Claims. (Cl. 126—9)

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This invention relates to an outdoor stove-grill.

An object of the invention resides in the provision of a stove-grill which may be used on lawns, beaches, woodland picnics and the like, and which possesses certain structural and functional advantages which will hereinafter be pointed out.

A further object of the invention resides in so constructing the device that its fire box may be adjusted to and supported in various positions beneath a grid so that different intensities of heat may be applied to different parts of the grid and to the food supported thereby.

It is a further object of the invention to so construct the adjusting means for the fire box that either or both sides of the fire box may be raised or lowered and securely locked in their adjusted positions against accidental displacement.

Another object of the invention is to so construct the device that it will include supporting legs, an adjustable fire box, a grid for the food, a shelf which may also be used as a hot plate and a spit support, all of which are so constructed and arranged that when the stove-grill is not in use various parts may be folded into a compact assembly.

With these and other objects in view, such as will appear as the description of this invention progresses, the invention resides in the combination and arrangement of parts described in the specification, illustrated in the drawings and recited in the appended claims.

In the drawings:

Figure 1 is a side elevation of the stove-grill, the position of one of the legs as it is moved toward a folded condition being shown in dot and dash lines;

Figure 2 is an end view of the stove-grill;

Figure 3 is a top plan view with parts thereof broken away;

Figure 4 is an enlarged fragmentary vertical sectional view, showing particularly the adjusting and supporting means for the fire box;

Figure 5 is a section on line 5—5 of Figure 1 showing the mounting of the grid; and

Figure 6 is a fragmentary view showing the relation of the grid, fire box and legs when the stove-grill is folded for transportation.

Referring now to the drawings, the stove-grill is provided with a grid that includes a foraminous food supporting portion 1, that is carried by a frame 2. This frame is preferably formed of

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angular metal having horizontal webs as disclosed in Figure 5.

The vertical web of each end member and of each side member of the frame 2 carries a grid support 2' which is adapted to support the foraminous food supporting portion 1 of the grid. Each of these supports 2' is spaced from the adjacent horizontal web of the frame 2 of the grid to form a space for the reception of the foraminous food support 1. This support 1 terminates short of the adjacent vertical webs of the frame 2 and freely rests on the supports 2' so that when the food support 1 expands under the influence of heat there will be no force exerted against its edges which will tend to buckle it out of form.

In order to support this grid there is provided a plurality of legs, preferably one at each corner of the grid. Each of these legs, as illustrated in Figures 1 and 2, for instance, includes a stub section 3, which is permanently and rigidly secured to the frame 2 of the grid and is preferably angular in horizontal cross section.

Each leg also includes a movable leg section 4 which is preferably angular in horizontal cross section and is pivoted at 5 to the adjacent stub section 3. Preferably, one pair of the legs may be provided with wheels 6 to facilitate the movement of the grill-stove. In use, however, the other pair of legs will act to anchor the stove-grill against accidental movement.

In order that the stub sections 3 and the movable leg sections 4, when the latter are in their extended positions, may be maintained in a rigid association with each other, the stub sections are provided with keys 7 and the movable leg sections 4 are provided with slots 8 through which the keys may be caused to project. Each key and its cooperating slot are so constructed that, after the key has passed through the slot, it may be turned to lock the sections 3 and 4 of the leg together.

A multiple compartment fire box 9 is adjustably supported by the legs so that it may be adjusted horizontally to occupy a position substantially parallel to the plane of the grid and so that either end of the fire box, and consequently one or the other of its compartments, may be adjusted to occupy a position closer to the grid than the other end.

The adjusting means is so constructed that, regardless of the adjusted positions of the fire box, the fire box will be securely maintained in its adjusted position against accidental displacement. In order to accomplish this adjusting and

securement of the fire box the following mechanism is provided.

In one web of each movable leg section 4 a vertical slot 10 is formed, the lower end of this vertical slot 10 being curved inwardly as at 11 to form a supporting notch. A plurality of notches 12 are formed in this web of the movable leg section and communicate with and extend inwardly and downwardly from the adjacent slot 10, forming thereby projections 13 that extend upwardly beyond the lower ends of the notches.

At each end of the fire box 9 is an adjusting and fire box supporting bar 14, which is provided with end portions 15 that extend into and are slidable in slots 10 of opposite legs. Each of these rods 14 is maintained permanently in the slots 10 by suitable means such as end pieces 15'. Each of these adjusting and supporting bars 14 is provided with arms 16 which terminate in trunnions 17, these trunnions being pivotally engaged with the fire box 9, the pivotal engagement in the form of the invention illustrated in the drawings being by means of bearing members 18 that are secured to the opposite sides of the fire box adjacent their ends. Each adjusting and supporting bar 14 is provided with a handle 19, which is constituted by a portion 20 that extends outwardly in angular relation to the arms 16 and by a hand grip portion 21 that extends downwardly from the angular portion 20 preferably in substantial parallelism with the arms 16. With this construction either end of the fire box 9 may be moved upwardly or downwardly independently of the other end, or simultaneously with the other end to adjust the fire box into a horizontal position or into a position where on end of the fire box is lower than the other end. It will be obvious that the adjusting and supporting bar 14 at either end of the frame, when located in the slot 10, may be moved upwardly or downwardly by means of the hand grip 21 of the handle to bring the adjusting and supporting bar into substantial alignment with any of the notches 12, or into the lowermost notch 11. Moreover, when the adjusting and supporting bar is in such substantial alignment the bar may be moved inwardly through force applied to the hand grip 21 to engage in the notch 12 with which it is substantially aligned. The adjusting and supporting bar 14 during such adjustment moves about the trunnions 17 as a pivot. When the adjusting and supporting bar 14 rests in the bottoms of aligned notches 12, the arms 16 will be inclined inwardly and downwardly from their points of pivot at the trunnions 17, or will in effect be beyond what might be termed dead center. That is to say, inwardly of a vertical line dropped from the center of the pivot of the trunnions 17. At the same time the hand grip portion will be caused to extend inwardly and downwardly from the angular portion 20 and will be located within the confines of the frame, and thus protected from accidental engagement by exterior moving bodies.

This position of the arms 16 will insure the retention of the adjusting and supporting bar 14 in the engaged notches for the weight of the fire box and its contents will tend to more firmly force the adjusting and supporting bar 14 into the notches.

Moreover, the projections 13 will create a barrier to the accidental outward movement of the supporting bar 14, which must be overcome before the bar can be disengaged from the notches and thrown into the dot and dash line position illustrated in Figure 4, where it is to the other side of dead center, as defined and within the slot 10.

Thus, assuming the adjusting and supporting bar 14 to be within the slot 10 and located at the lower end thereof, as at 11 of Figure 1, the adjacent end of the fire box may be adjusted upwardly by drawing the hand grip into a convenient outwardly extending position, at which time the adjusting and supporting bar 14 will ride upwardly on the curved side 22 of the slot 10 against the force exerted by the weight of the fire box and its contents, if any there be. This side of the box may then be raised by simply pulling up on the hand grip 21, at which time the adjusting and supporting bar 14 will engage the edge 23 of the slot 10 and thus maintain the handle in its outwardly extending position, the upward movement imparted through the hand grip 21 will move the adjusting and supporting bar 14 upwardly in the slot 10, and at the same time raise the fire box. When the adjusting and supporting bar 14 is aligned with the complemental notches 12 in the adjacent legs of the frame, the adjusting and supporting bar may be pushed inwardly to engage in said notches and permitted to rest upon the bottoms of complemental notches. This movement will swing the hand grip 21 downwardly and inwardly, as illustrated in Figure 4.

Of course it is to be understood that either or both ends of the fire box may thus be adjusted, and either simultaneously or successively. When it is desired to adjust the fire box at one end, for instance, when the adjusting and supporting bar 14 is within the notches 12 of the complemental legs, the hand grip 21 is pulled outwardly and the bar forced over the projections 13 and moved into the slot 10, which will permit adjustment to another pair of notches 12 or to the lower notches 11. However, accidental force which would tend to displace the adjusting and supporting bar 14 from the notches with which it is engaged, must be of such magnitude that the resistance to movement of the bar 14 created by the weight of the fire box and its contents, and by the projections 13, must be overcome. With such an arrangement, however, there is little likelihood of an accidental force being of sufficient magnitude, or applied for a sufficient length of time, to accomplish the disengagement of the bar 14 from the notches.

With this provision for adjustment of the fire box not only may the fire be adjusted in relation to the food stuff that is being cooked, but additionally the fire box may be moved downwardly to facilitate the replenishing of the fuel without in any way disturbing the food stuff upon the grid.

The preferred form of the fire box as has been disclosed in the drawings is divided between its ends by a partition 24, which resolves the fire box into two compartments 25 and 26 for separate fuel banks. This partition 24, as illustrated at the left hand of Figure 4, is maintained in position by a struck out portion 27.

The bottom of each fuel compartment is made slidable and is provided with draft perforations 28. This perforated bottom 29 of each compartment is mounted slidably in clips 30 that are struck from the side walls of the fire box. The inner end of each bottom 29 is provided with an up-struck stop 31 which limits the outward sliding movement of the bottom 29 by engagement with an abutment 31' that is struck from each end of the fire box as disclosed in Figure 4 of the drawings.

Each end of the fire box 9 carries a pivoted latch 32, which engages the end of each slidable

bottom 29 and prevents its accidental outward movement. It will be realized, however, that when it is desired to drop the fire or ashes, the latch 32 of either or both of the compartments may be swung upwardly about its pivot and the bottom or bottoms 29 drawn outwardly to create a dropping space.

The stove-grill is also provided with a roasting or broiling spit which includes a shaft 33, a pronged food support 34, which is slidably, adjustably and removably mounted on said shaft, a crank handle 35 and supports 36.

Each of these supports 36, as illustrated in Figure 2 of the drawings, is pivotally and slidably mounted on a pivot 37 carried by the frame 2 of the grid, and is notched as at 38 for the reception of the shaft 33 of the spit. The lower end of each support 36 is notched as at 39, in which notch is adapted to engage a stud 40 which is carried by the frame through the medium of a bracket 41. This engagement prevents the movement of the support pivotally in one direction in the manner later described and also prevents the tilting upwardly of the upper end of the support. At the lower end of each support 36 is a projection 42, which is substantially longer than the length of the slot 43, in which the pivot 37 operates. The pin 37 and slot 43 permit the support to be moved upwardly while in a vertical position until the lug 40 disengages the notch 39, at which time the pivot 37 will engage the bottom of the slot 43 and at which time the projection 42 will not clear the lug 40. With this arrangement it is possible to swing the support 35 only in one direction, namely, to the left in Figure 2. When swung into alignment with the frame 2, the supports will be in their folded or inoperative positions and will engage with and be maintained in folded position by spring clips 44.

The grid is provided with a shelf 45 which is pivoted to the frame 2 by pivots 46 operating slidably in slots 47, thus permitting the shelf to be swung outwardly to the position shown in Figure 1, or inwardly over the grid to act as a hot plate in the position shown in dot and dash lines in Figure 1, the shelf being supported in its extended position by a bracket 48 and being held in its hot plate position by a clip 49 that engages the frame 2 of the grid.

When it is desired to fold the stove-grill for storage and transportation purposes, the fire box is moved upwardly to its adjustment limit, at which time the rods 15 will be located at the upper ends of the slots 12 adjacent the pivot piece 5. When the fire box is in this position the movable leg sections 4 may be swung inwardly about the pivots 5 while the fire box remains permanently attached to the legs because of the fact that the arms 16 on the rods 15 swing about the pivot piece 17 in an inward direction, the lengths of the arms being sufficient to permit such swinging of the legs about the pivot 5 while the rods remain in the slots 10. One pair of movable leg sections, such as the right hand pair of Figure 1, is swung inwardly to and beyond the dot and dash line position illustrated in Figure 1, and into position in close proximity to the bottom of the fire box. The other pair of movable leg sections 4 is then swung inwardly to overlap the already folded leg sections until the latch members 50 and 51 respectively on the legs and the fire pot interengage. This interengagement will maintain the pair of legs on which the latch member 50 is mounted in folded condition and

the other pair of legs which have been previously folded will be maintained in their folded positions by engagement with the cross bar 52.

The shelf 45 may be folded over into the dot and dash line position shown in Figure 1 and maintained in this position by the latch 49 and the spit supports 36 folded into alignment with the ends of the frame 2 in the manner that has been described.

The spit having been removed from the supports 36 and the food prongs 34 having been removed from the shaft 33, the shaft may be inserted in holes 53 in complemental stub sections 3 of two of the legs. It is, of course, possible to store the food supporting prongs within the fire box or to reinsert the shaft 33 through the prong member after the shaft 33 has been inserted through one of the holes 53 and to support the prong member on the shaft thereafter. It will be noted that when it is desired to use the stove-grill without the spit, the spit supports may be folded into parallelism with the ends of the frame 2 and so that this may be accomplished at the end of the grid adjacent the shelf 45, a space 54 is provided between the end of the grid and the adjacent edge of the shelf.

When it is desired to move the grill from place to place while the fire box contains burning fuel, and even when food is being cooked upon the grid, this may be safely and easily accomplished by swinging the movable leg sections 4 of the legs opposite to those on which the wheels 6 are mounted upwardly into engagement with the clips 51, the grill being supported at this time by the grasping of the bracket or handle 48. Thus the grill may be moved as desired without disturbing the fire in the fire box or the food upon the grid.

While a particular form of the invention has been illustrated in the drawings and described in the specification, it is to be understood that details of structure may be varied without departing from the spirit of the invention or exceeding the scope of the claims, and it is therefore not desired that this invention be limited to the specific embodiment that is illustrated and described.

What is claimed is:

1. A stove-grill comprising a grid including a substantially rectangular frame, a pair of legs adjacent each end of said frame and each including a stub section rigid with said frame and extending downwardly therefrom and a movable section pivoted to said stub section and adapted to extend downwardly therefrom in substantial alignment therewith and to be moved on said pivot to extend in angular relation thereto beneath said frame, a fire box mounted for vertical movement between said legs, each of said legs having a vertical series of notches therein, a rod extending between the members of each pair of movable sections and having extensions adapted to selectively engage in said notches, said rod including arms extending upwardly therefrom and trunnions on the ends of said arms pivotally engaged with said fire box.

2. The construction defined in claim 1 wherein each rod is provided with a handle extending angularly in relation thereto and toward the adjacent end of said stove-grill, said handle including a hand grip extending downwardly from said angular portion.

3. The construction defined in claim 1 wherein said extensions when engaged in said notches are

offset inwardly in respect of the axis of pivot between said trunnions and said fire box.

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