Z. A. CHURCH AND W. E. THOMAS.

FOLDING AUTO AND CAMPER'S STOVE.

APPLICATION FILED AUG. 25, 1919.

1,368,388.

Patented Feb. 15, 1921.

Fig. 1.

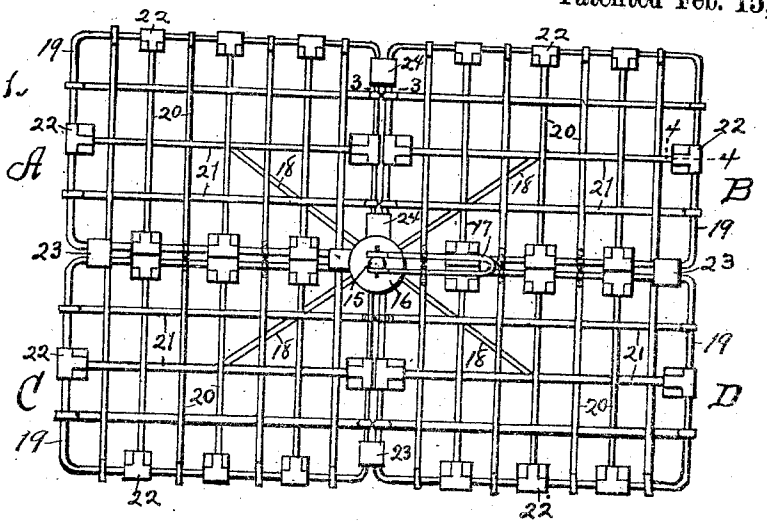


Fig. 2.

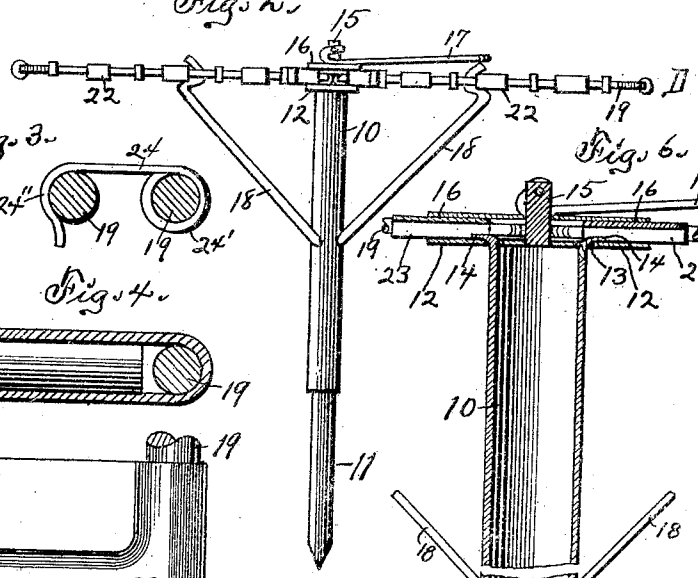


Fig. 3.

Fig. 4.

Fig. 5.

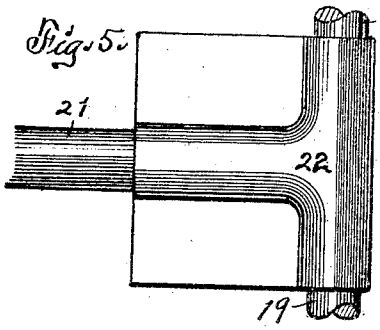


Fig. 6.

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UNITED STATES PATENT OFFICE.

ZALA A. CHURCH AND WALTER E. THOMAS, OF JEFFERSON, IOWA.

FOLDING AUTO AND CAMPER'S STOVE.

1,368,388. Specification of Letters Patent. Patented Feb. 15, 1921.

Application filed August 25, 1919. Serial No. 319,771.

To all whom it may concern:

Be it known that we, ZALA A. CHURCH and WALTER E. THOMAS, each a citizen of the United States of America, and resident of Jefferson, Greene county, Iowa, have invented a new and useful Folding Auto and Camper's Stove, of which the following is a specification.

The object of this invention is to provide improved means for use in out-door cooking.

A further object of this invention is to provide an improved construction for auto-and-campers' stoves adapted for folding on transverse and longitudinal lines for convenience in packing and transportation.

A further object of this invention is to provide improved telescopic supporting means for a stove plate.

A further object of this invention is to provide improved means for detachably bracing a stove plate to supporting means.

A further object of this invention is to provide improved means for detachably securing a stove plate to supporting means.

Our invention consists in the construction, arrangement and combination of elements hereinafter set forth, pointed out in the claims and illustrated by the accompanying drawing, in which—

Figure 1 is a plan and Fig. 2 a side elevation showing our improved device extended and arranged for practical use. Fig. 3 is a cross-section on an enlarged scale on the indicated line 3—3 of Fig. 1. Fig. 4 is a cross-section on an enlarged scale on the indicated line 4—4 of Fig. 1. Fig. 5 is a plan on an enlarged scale of the parts intersected by the dotted line 4—4 in Fig. 1. Fig. 6 is a vertical section on an enlarged scale through the center of the device, illustrating the means for detachably connecting the folding plate to the support.

In the construction of the device as shown the numeral 10 designates a tubular mast or post adapted to receive a stake 11 telescopically, which stake is adapted to be fixed by penetration in an upright position in the earth. A head 12, preferably made of relatively thin metal and of circular form, is provided with slots 13 in an annular row concentric with its center and lugs 14 are formed on the upper end of the tubular mast 10, which lugs extend through the slots 13 and are clenched on the upper face of the head. Thus the head is rigidly secured to the mast. The head 12 is formed with a stud 15 centrally arranged and rigidly secured thereon and a washer 16 is loosely mounted on said stud. A cam lever 17, in this instance made of looped wire with outturned perforated ends flattened and enlarged in width, is fulcrumed on the stud 15 outside of the washer 16 and is adapted, when closed, to clamp the washer rigidly to any device or object which may be interposed between said washer and the head 12 as hereinafter set forth. A series of holes are formed in the mast 10 in an annular row substantially midway in the length of said mast and devices, such as braces 18, are mounted in said holes and extend obliquely upward therefrom. End portions of the braces extend within the mast and are adapted to be engaged by the upper end of the stake 11 and limit and determine telescoping movement of the stake in the mast in one direction, thus determining the altitude at which the mast, and devices carried thereby are held by the stake. The stove plate is mounted on the mast, the central portion of the plate being received and clamped between the head 12 and washer 16, and said plate is held and supported additionally by engagement of the outer ends of the braces therewith at points laterally removed from the mast as shown in Fig. 1. The stove plate is composed of a plurality of separate and like sections, in this instance four in number, each section occupying substantially one-quarter of the expanse of the complete plate. The several sections of the stove plate are designated generally on the drawing by the letters A, B, C and D. Each section of the stove plate is made with an outer frame 19 of wire, which frame is substantially rectangular in form and endless. Cross-bars 20 and longitudinal bars 21 connect the sides and ends respectively of the frame 19 and the ends of said bars may be connected in any desired manner to the frame; but a metal clip is provided and shown for such purpose. The metal clip is designated by the numeral 22 and is folded and pressed in such manner as to embrace the frame and also to embrace an end of a bar at right angles to and abutting the embraced portion of the frame. Some of the bars are shown with eyes on their ends embracing the frame. The bars 20 and 21 are shown interwoven and such arrangement is deemed preferable;

yet some other means of connection may be employed, such as electric welding at the points of crossing of the bars without interweaving, which means of connection is common and well known and no claim is made therefor. Some of the adjacent sections of the plate, such as A—C, C—D and B—D, are pivotally connected together by means of metal hinge-clips 23 embracing pivotally adjacent and parallel portions of frames 19. Because of the hinging together of sections as stated, one section may be folded on another and the two together on the other two, so that the plate may occupy a space or area of substantially one-quarter that of the extended plate, for packing and transportation, after said plate is released from the mast. The corners of the frames 19 are rounded, and said frames are slightly spaced apart by the hinge-clips 23, thus providing space for the passage of the stud centrally of the extended plate when the plate is received and locked between the head and washer. The sections A—B are adapted to be detachably connected by hook-clips 24, made of metal. Each hook-clip (Fig. 3) is formed with an eye 24′ pivoting on one end portion of the frame 19 of the section B and, opposite to said eye, is formed with a hook 24″ adapted to engage the adjacent end portion of the frame 19 of the section A. The hook clips 24 provide detachable connections between the sections A and B, and when detached permit folding of said sections upon the sections C and D respectively, by movement in opposite directions, after which the sections A—C may be folded upon the sections B—D, thus reducing each of the greater dimensions of the grid by one-half. The hook-clips 24 preferably are made of spring metal in order that the hooks thereof may spring over the frame members engaged thereby. The hook-clips 24 are moved through arcs to and from latching positions after the sections A, B, C and D are extended in the same plane manually. When in the positions shown, the hook-clips 24 connect the sections A and B and tend to hold the stove-plate in extended horizontal position preliminary to locking of the plate between the head 12 and washer 16. After the plate is locked to the mast, and the hook-clips 24 placed in latching position, the braces 18 are placed as shown to uphold the laterally-extending portions of the stove plate. The sections may be made of any desired size and strength of material, so as to accommodate cooking utensils throughout its area and support them safely during the operation of cooking with a fire laid beneath the stove plate. The mesh of the stove plate or grid may be varied as desired and bars or wires of different diameters may be employed so that the plate or any part of it may be used for broiling meat or toasting bread in addition to supporting cooking utensils.

We do not desire to be limited to the details of construction and materials described, as the same may be modified in many particulars without departing from our invention.

We claim as our invention—

1. A folding auto-and-camper's stove, comprising a central mast, a stake therefor, a sectional stove plate mounted on the upper end of the mast, means for hinging together sections of said plate on lines intersecting each other at right angles diametrically of the mast, and braces connecting said plate sections and mast circumferentially of the mast, the outer end portions of said braces being arranged substantially midway between the mast and a circle intersecting corners of the plate.

2. A folding auto-and-camper's stove, comprising a central mast, a stake telescoping relative to said mast, a stove plate mounted on the upper end of said mast, and braces connecting said plate and mast circumferentially of the mast, end portions of said braces penetrating the mast and serving as a stop for the stake.

3. In a camper's sectional stove, the combination with a sectional stove plate of a mast, a stake therefor, a head on said mast, a stud on said head extending through said plate, a washer adapted to be loosely mounted on said stud and overlie the separate sections of said plate, a cam lever fulcrumed on said stud and adapted to clamp said washer to said plate and thereby apply pressure to the sections axially of said mast, and braces detachably connecting the mast and plate circumferentially of the mast.

4. In a camper's sectional stove, the combination with a sectional stove plate of a mast, a stake therefor, a head on said mast, a stud on said head extending through said plate, means for clamping said plate to said head and thereby applying pressure to the separate sections thereof axially of said mast, and removable means connecting the mast and plate circumferentially of the mast.

Signed at Jefferson, in the county of Greene and State of Iowa, this 31st day of July, 1919.

ZALA A. CHURCH.
WALTER E. THOMAS.