T. B. GADDIS.

FIELD STOVE.

APPLICATION FILED JUNE 26, 1914.

1,146,490.

Patented July 13, 1915.

2 SHEETS—SHEET 1.

Fig. 1a

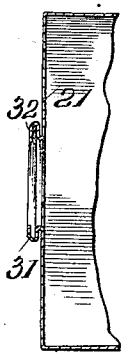


Fig. 1.

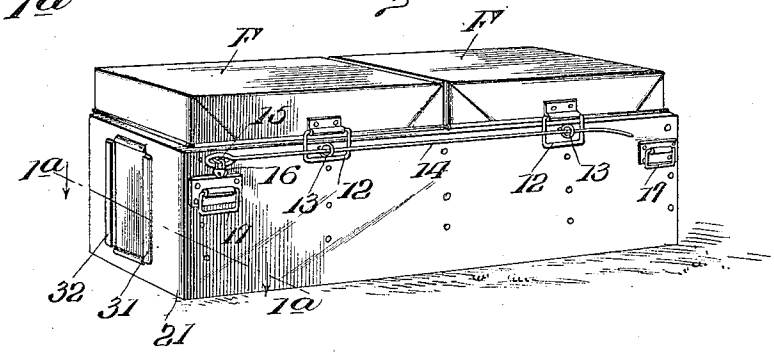


Fig. 2.

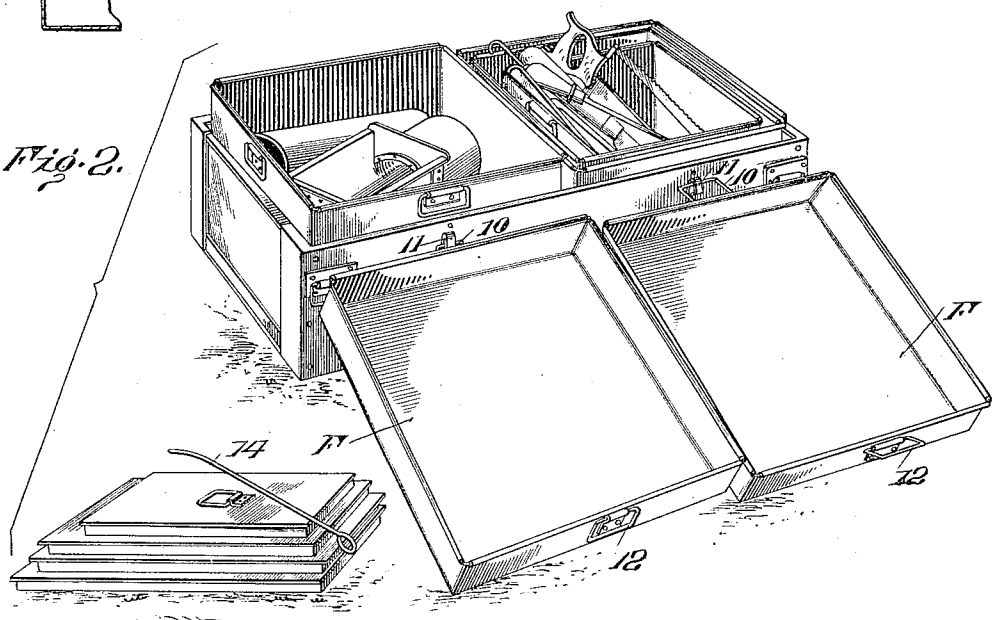
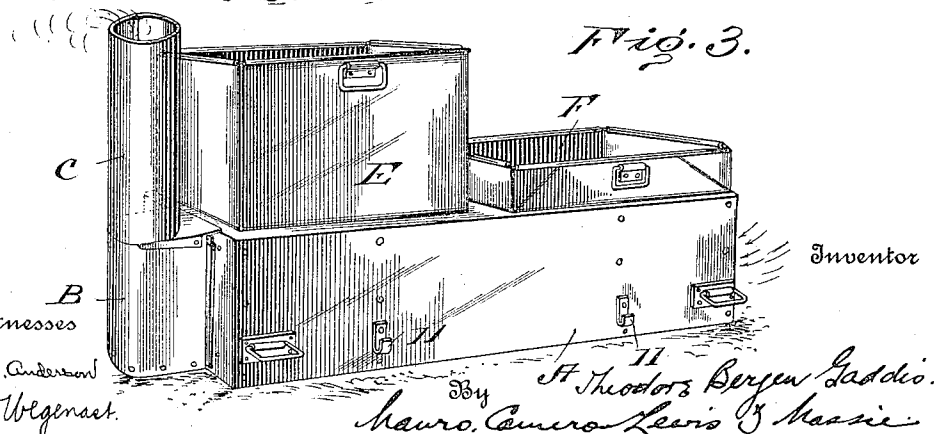


Fig. 3.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 5.

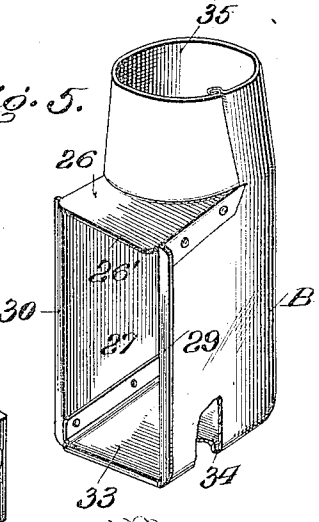
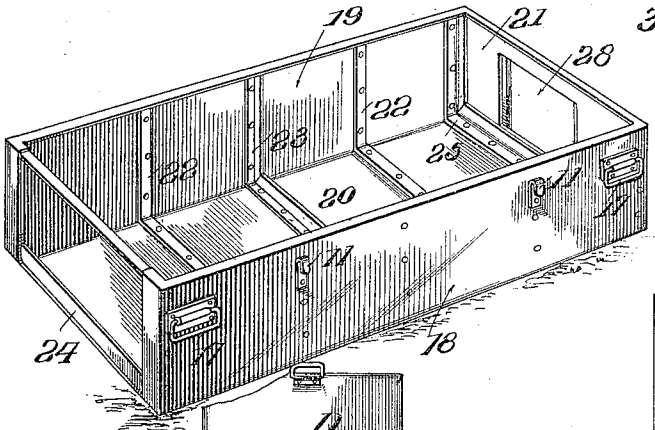


Fig. 4.



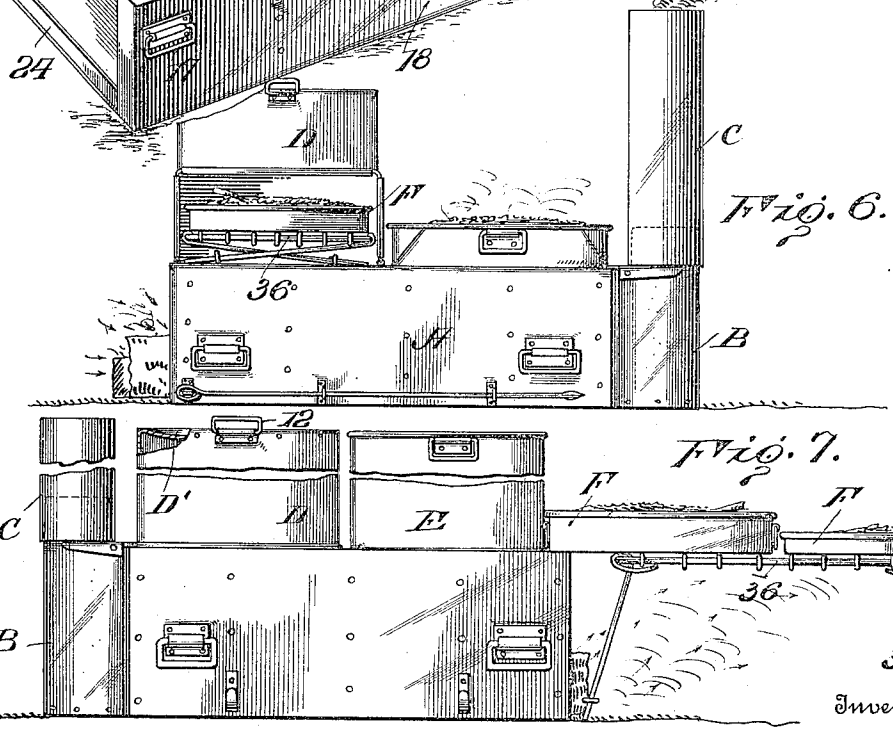


Fig. 6.

Fig. 7.

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UNITED STATES PATENT OFFICE.

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FIELD-STOVE.

1,146,490. Specification of Letters Patent. Patented July 13, 1915.

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To all whom it may concern:

Be it known that I, THEODORE BERGEN GADDIS, a citizen of the United States of America, and a resident of Jersey City, New Jersey, have invented a new and useful Improvement in Field-Stoves, which invention is fully set forth in the following specification.

The present invention relates to stoves, and particularly field stoves of the type in which the utensils are nested and packed when the stove is not in use.

One of the greatest problems associated with the movements of large bodies of troops is the question of food, and the necessity for promptly feeding, in all kinds of weather, a great number of men wearied from a day's hike or fighting. Many difficult problems are presented to the commissary, not the least of which is the transportation of food and the means for cooking the same. Some of the regulation army ranges weigh several hundred pounds when packed for transportation, and present obvious disadvantages on an expedition. Further, in regions where fuel is scarce, it is necessary to do a great deal of cooking with little fuel. The cooking must always be done quickly and frequently in most inclement weather. In the face of these difficulties experience has demonstrated the need for a light, strong, simple and durable stove, in which utensils and the like may be compactly nested, which may be easily transported and quickly put in commission, and on which food enough for a full company of from eighty to one hundred men may be rapidly cooked, in all kinds of weather, with a minimum consumption of fuel.

The objects of the present invention are to provide a stove which will answer all of these requirements.

The invention will be better understood by reference to the accompanying drawings, illustrating one expression of the inventive idea, and wherein—

Figure 1 is a perspective view showing the stove and associated parts packed; Fig. 1^a is a horizontal sectional view on the line 1^a—1^a of Fig. 1; Fig. 2 is a perspective view showing the stove in a partly unpacked condition; Fig. 3 is a perspective view showing the stove in use; Fig. 4 is a perspective view of the stove or fire-box; Fig. 5 is a perspective view of the elbow; Fig. 6 is a side view of the stove in use, showing the oven slightly raised to inspect its contents; and Fig. 7 is a side view of the stove in use, with a grating associated therewith.

Referring to the drawings, A indicates a fire-box or combustion chamber, B an elbow and C a stove pipe that may be placed on said elbow, if desired.

D is an oven.

E is a boiler and F are pans, all of which will be referred to generally by the designation "pan sections."

When the stove is ready for transportation, the elbow, stove pipe and various pan sections are nested within the fire-box A, and a suitable closure holds the parts in this nested position. As here shown, this closure is constituted (Fig. 1) by two pan sections F, the handles 10 on one side of which engage latch members or hooks 11 provided on the fire-box A and the handles 12 on the other side of which engage around latch members or eyelets 13 provided on the fire-box. The parts are secured in this position by suitable means, here shown as a bar or poker 14 passing through eyelets 13, said poker being locked in place in any desired manner. Preferably, a loop at the end of the poker engages around an eyelet 15 on the fire-box, and a lock 16 engages said eyelet 15. The stove is now ready for transportation (Fig. 1) and may be readily carried by handles 17, as one would a steamer trunk, or otherwise transported.

When it is desired to put the stove in use, the poker 14 is withdrawn and the pan sections F constituting the closure are removed (Fig. 2), when the remaining pan sections, elbow, stove pipe, tools and utensils may be readily lifted or dumped from the fire-box. This fire-box A is preferably made of sheet iron and, as shown in Fig. 4, is of oblong shape having sides 18 and 19 that are connected by a surface 20 on which the pan sections are supported when the stove is in use. The part of the fire-box A opposite the surface 20 is open. The elbow B is secured to an end 21, as more fully described hereinafter, and the other end of the fire-box, through which fuel is introduced, is substantially open. Suitably spaced bracing elements 22 are secured in any desired manner, as by riveting, to the sides 18 and 19

and surface 20, and the rivets that secure said bracing elements 22 in place also secure the latching members 11 and 13 in position on the fire-box. Intermediate the ends of the fire-box is secured an angle iron 23 that acts not only as a brace but also as a spacing element for the utensils or pan sections when the stove is packed. A second angle iron 24 constitutes a door frame at the end of the fire-box opposite end 21, and materially strengthens and adds rigidity to the structure. At the junction of end 21 with sides 18 and 19 and surface 20, there is secured an additional angle iron 25 in order to strengthen the parts at the hottest point in the fire-box. As thus constructed, the fire-box is exceedingly simple, strong and rigid and well adapted to withstand rough usage and wide ranges of temperatures, and to protect the fire therein, which is built on the ground, from the elements. It will also cool off rapidly, which is a matter of importance.

Heretofore, the elbow to which the stove pipe is secured has been a weak part of stoves of this character, the elbow wearing rapidly at the point where it entered the stove flanges and its life being rendered short by the concentration of heat in the joint. The present invention provides an elbow B (Fig. 5) of novel construction, preferably U-shaped in cross-section and made of sheet metal. A flat top 26 is suitably secured in place, as by riveting. This elbow is provided with a substantially rectangular opening at 27, which opening registers with an opening 28, preferably of similar size and shape, in the end 21. The elbow is held in position on the fire-box by suitable means, and, as here shown, flanges 29 and 30, adjacent opening 27, and preferably formed by turning back the material of the elbow, engage retaining means on the support or fire-box, preferably in the form of guides 31 and 32 formed integrally with end 21 by turning the metal over and back again into S-shape, as best shown in Fig. 1a. Such guides are readily and economically formed and leave no raw edges to burn or rust away, or tear the soldiers' fingers. The bottom 33 of the elbow is preferably raised slightly above edge 34, in the interest of economy and durability, and, when the elbow is in place, this edge 34 rests on the ground, thus preventing the elbow from turning or twisting. Turning or twisting is further prevented by the provision of a projecting lip 26′ on top 26, which lip engages the top of the stove. The top 26 and bottom 33 are flat and are arranged substantially at right angles to the longitudinal axis of the elbow. Preferably the part 35 of the elbow B, that engages the stove pipe, is made tapering so that it will fit practically any of the usual size stove pipes. The life of such an elbow is greatly increased, as the heat does not concentrate on any particular part, the elbow is firmly held in position on the stove, and is readily put in place and removed.

A further feature of the present invention resides in the provision of a collapsible support or grating 36 which, as shown in Fig. 7, may be employed adjacent the stove to support pan sections F and thus utilize heat that would otherwise be wasted. Further, this grating 36, when collapsed, is used as a false bottom in oven D to support a pan section F. This oven D is preferably slightly dished on top at D′ to hold hot coals to assist in browning biscuits, etc. It will also be observed that the handles 12 on said oven are placed near the dished top thereof so that, if desired, this oven might be used as part of the closure for the stove when the parts are nested and packed ready for transportation, as shown in Fig. 1.

While the improved device is particularly adapted for military service, it also fills a long-felt want experienced by campers and surveying gangs. Built in various sizes, it may be adapted for the use of practically any number of men.

While for the purpose of clearness, one expression of the inventive idea has been shown and described in detail, it is to be understood that the invention is not limited to the construction illustrated, but that the inventive idea may receive various mechanical embodiments within the limits of the appended claims.

What is claimed is:—

1. The combination of a fire-box or combustion chamber having an open bottom, of a plurality of pan sections coöperating with said fire-box to close said bottom when the device is not in use, handles being provided on one of said parts and eyelets on the other part, said handles passing around said eyelets, and a poker passing through said eyelets and holding together said fire-box and pan sections.

2. In a device of the character described, the combination of a fire-box, an oven adapted for use on said fire-box, and a collapsible grating forming when extended a support for utensils near the fire-box and when collapsed a false bottom for use in the oven.

3. In a device of the character described, the combination of a fire-box having an opening in one end and provided adjacent said opening with retaining means, and an elbow adapted to engage over said opening and being provided with members that engage said retaining means, said elbow resting on the ground when the device is in use and having a part that engages the top of the fire-box at that time.

4. In a device of the character described, the combination of an elbow substantially U-shaped in cross section having a bottom and top arranged substantially parallel and

being provided with an opening on one side with flanges adjacent said opening, and a support provided with means to engage said flanges, said top being provided with a projecting portion that engages the top of said support.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THEODORE BERGEN GADDIS.

Witnesses:
HENRY DELATURAL,
BEATRICE BUSH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."