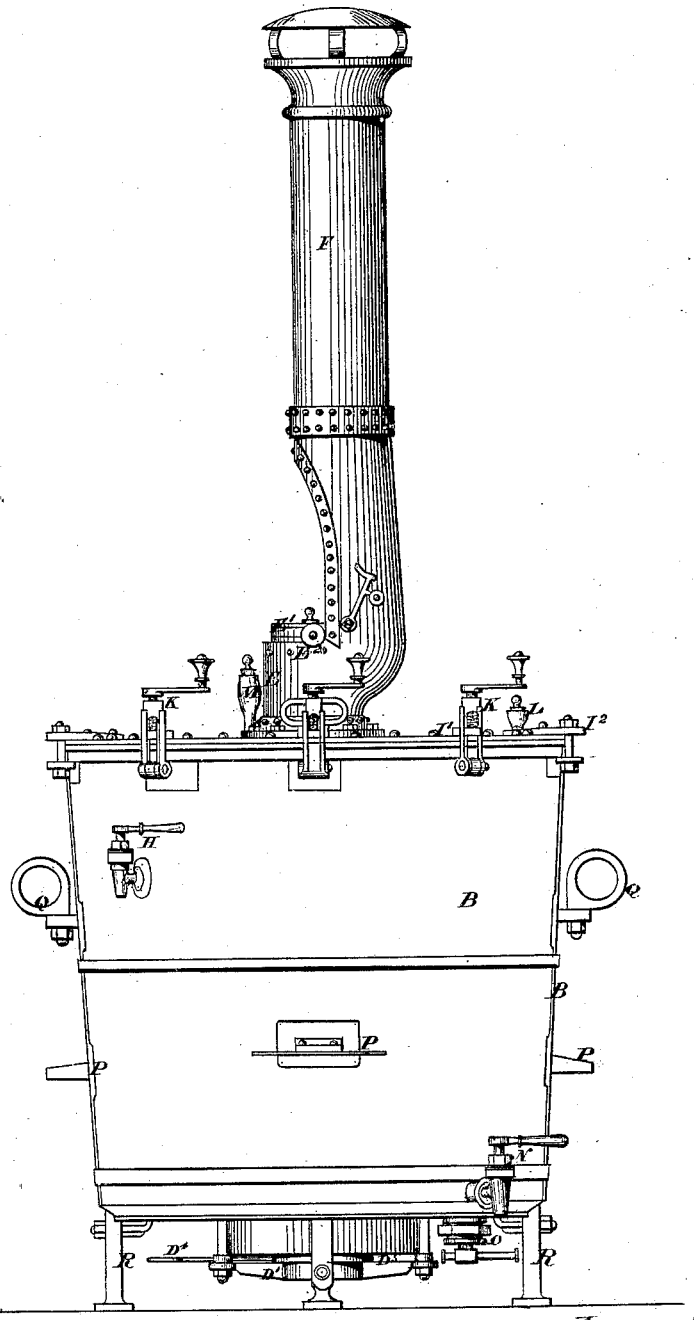
9 Sheets—Sheet 1.

C. NIKIFOROFF.

Portable Cooking Apparatus.

No. 206,349. **Patented July 23, 1878.**

FIG. 1.



Witnesses:

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James McWright Jr.

Inventor:

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by James L. Norris. Atty.

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FIG. 2.

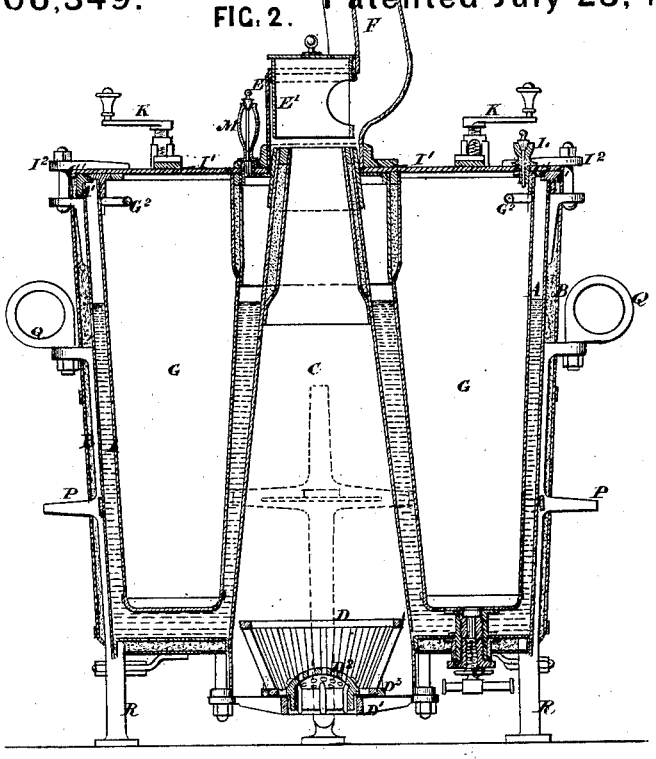
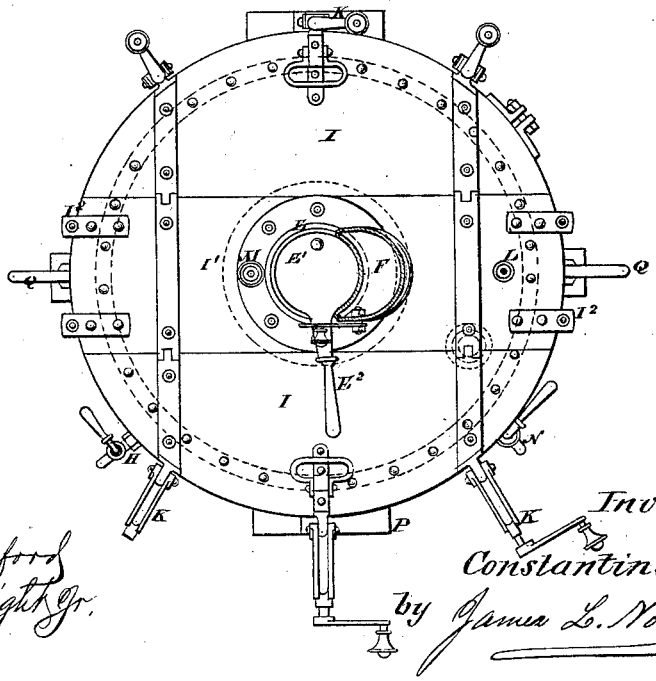


FIG. 3.



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3 Sheets—Sheet 3.

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Portable Cooking Apparatus.

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FIG. 5.

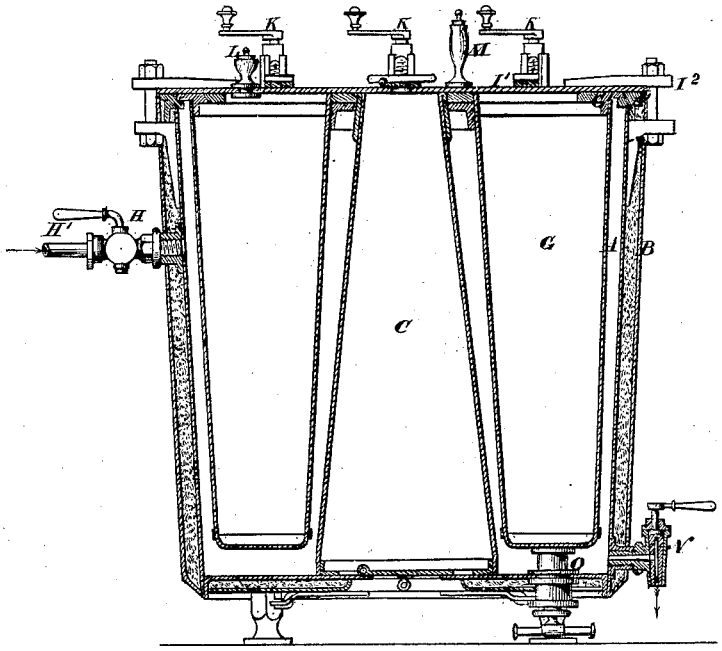
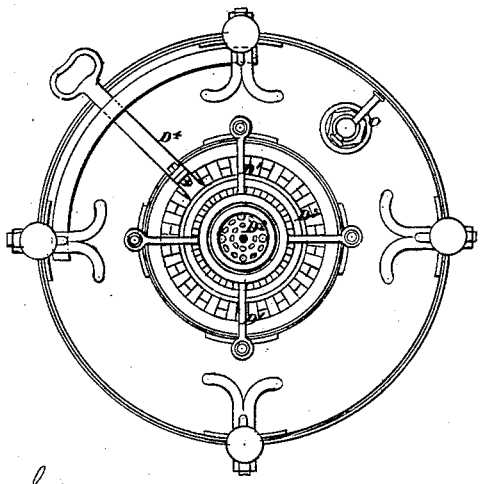


FIG. 4.



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UNITED STATES PATENT OFFICE.

CONSTANTIN NIKIFOROFF, OF WARSAW, RUSSIAN EMPIRE.

IMPROVEMENT IN PORTABLE COOKING APPARATUS.

Specification forming part of Letters Patent No. **206,349**, dated July 23, 1878; application filed February 26, 1878; patented in England, December 4, 1877.

To all whom it may concern:

Be it known that I, CONSTANTIN NIKIFOROFF, of Warsaw, in the Russian Empire, colonel of artillery, have invented an Improved Portable Cooking Apparatus; and do hereby declare that the following description, taken in connection with the accompanying sheets of drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from others of a similar class, together with such parts as I claim, and desire to secure by Letters Patent—that is to say:

My invention relates to an improved portable cooking apparatus, more particularly applicable for use in camp and with an army in action, the apparatus being so arranged that while occupying comparatively little space it will cook rapidly and in the most perfect manner the quantity of food required for a considerable number of men, the cooking being carried on even while the apparatus is following an army on the march, so as to be ready at any time to provide a meal for the men when a suitable opportunity presents itself.

My improved apparatus is shown on the accompanying drawings, in which Figure 1 shows a side elevation of the apparatus. Fig. 2 shows a central vertical section. Fig. 3 shows a plan of the top with section through the chimney. Fig. 4 shows a plan of the under side; and Fig. 5 shows a slightly modified form of the apparatus for cooking by steam.

The metal caldron or receptacle A, surrounded by a jacket, B, filled with non-conducting material to prevent loss of heat, has centrally a tapering fire-chamber, C, at the lower wider end of which is the fire-grate D, by preference projecting down below the bottom of A, as shown, so as to afford as much heating-surface in the chamber C as possible. The fuel is fed into the chamber through the hopper E at top, which is closed by a cover, and from the side of which branches the chimney-flue F, which is curved over the hopper so as to rise centrally, the lower part being formed, as shown in section at Fig. 3, to allow of access to the hopper. Within the latter is a cylindrical shield, E^1, having a hole in its side corresponding with that of the flue F, and capable of being turned by means of the handle E^2, so as to close the hole leading into the flue more or less, and thus to regulate the draft.

The fire-grate D is of basket shape, as shown, fitting with an annular projection on its under side into the central hole of the supporting-bars D^1, and having a convex perforated bottom, D^2, fitted therein, so that a great amount of surface is offered for the access of air to the fuel, thus enabling every description of fuel to be burned therein. Surrounding the basket is a ring, D^3, having projecting studs, which enter between the bars of the grate, as shown at Fig. 2, and having a lever, D^4, projecting laterally therefrom, by means of which a rapid to-and-fro motion can from time to time be imparted to the grate, so as, by the shaking action, to clear it of ashes. Within the caldron A is suspended a second caldron, G, by preference of copper, and of annular form, so as to surround the central fire-chamber, water-spaces being made to intervene between this, as also between the sides and bottom of the outer caldron, A, and the inner caldron, as shown. The caldron G rests with a rim, G^1, in an accurately-fitting groove in the rim A′ of the caldron A, so that, while the two parts fit steam-tight together, the caldron G can be readily removed from A by raising it by means of the handles G^2, when required, for cleaning or repairs. The outer caldron is filled with water up to the level shown in Fig. 2, which is determined by the gage-cock H, and the part of the chamber C above the water-line, as also the corresponding part of G, are both jacketed with non-conducting material, so as to prevent heat being radiated directly from the former to the latter. The caldron G constitutes the receptacle for the food to be cooked, the cooking being effected by the heat transmitted from the fire-chamber C through the water surrounding the caldron. Owing to the considerable difference of temperature existing between the water surrounding the fire-chamber and that at the outer circumference of the caldron an effectual circulation thereof is maintained. The caldron G is closed at top by a cover, I I^1, the middle part, I^1, of which, carrying the hopper and flue, is secured to the outer caldron, A, by means of lugs and screw-bolts at

I^2, while the two side portions, I, are hinged to I^1, so as to constitute lids, which are opened for gaining access to the interior of the caldron. They are at other times secured down by means of the clamping-screws K, hinged by means of links to the outer caldron, so that when unscrewed they can be turned down out of the way of the cover, as shown at Fig. 3.

In the part I^1 is provided, first, a safety valve or plug, L, for letting off steam from the inner caldron, G, and another safety-valve, M, to the outer caldron, the latter serving also to charge this caldron with water.

At the bottom of A is provided a cock, N, through which the water can be drawn off, and an opening in the bottom of the inner caldron, closed by a screw-plug, is provided at O, for drawing off the contents. The outer caldron is provided with lugs at P P, by which it can be suspended in a light framing on wheels when required for transport, and it has also loops at Q, through which poles can be passed for carrying it by hand. Lastly, it is provided with feet R, by which it is supported on the ground.

In the modification of the apparatus shown at Fig. 5, for cooking by steam instead of by direct fire-heat, the only alteration consists in the removal of the fire-grate and chimney-flue, the space C being closed by covers, so as to be available for heating food. The steam is introduced through the cock H and pipe H′, leading from any convenient source of steam, and the water of condensation is discharged through the cock N.

Having thus described the nature of my invention, and in what manner the same is to be performed, I claim in respect of portable cooking apparatus—

1. In combination with the firing-chamber C, the basket-shaped fire-grate D, ring D^3, with shaking-lever D^4, and the fuel-hopper E, with regulating-valve E′ and side flue F, substantially as herein described.

2. The combination, with the receptacle A and caldron G, of the cover composed of the central stationary hopper and flue, supporting portion I^1, and the hinged flaps I, secured by suitable clamps, substantially as described.

3. The combination of the receptacles A and G, fire-chamber C, grate D, fuel-hopper E, regulating-valve E′, side flue F, and hinged cover I I^1, constituting an improved portable cooking apparatus, substantially as herein described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses this 24th day of January, 1878.

CONSTANTIN NIKIFOROFF.

Witnesses:
D. ROSENBAUM,
JOHN JAWLER.