S. C. H. DIX.

COLLAPSIBLE GRATE.

APPLICATION FILED JAN. 17, 1912.

1,102,649.

Patented July 7, 1914.

Fig. 1

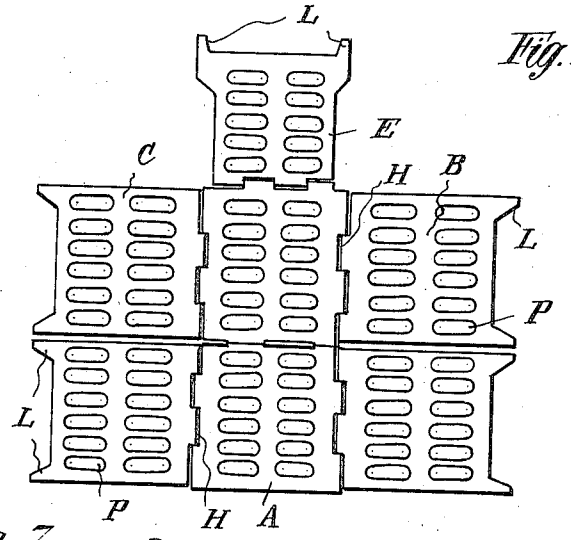
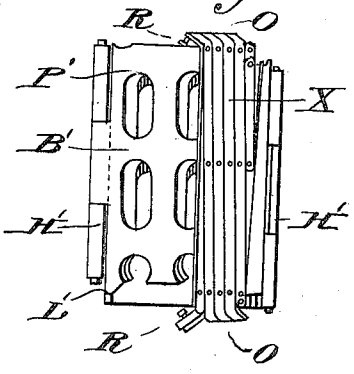


Fig. 5



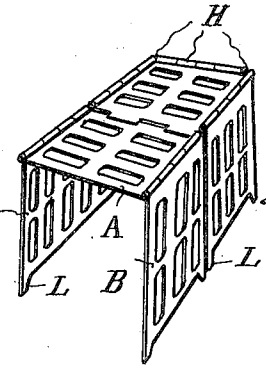


Fig. 2.

Fig. 7

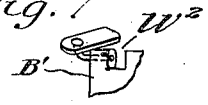


Fig. 8.

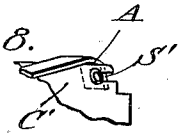


Fig. 6.

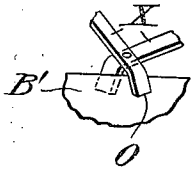


Fig. 9.

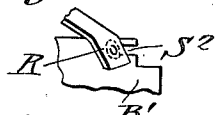
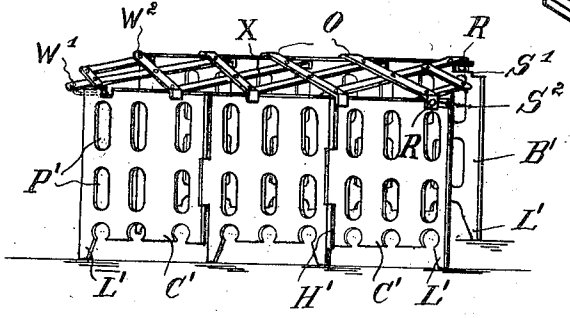


Fig. 4



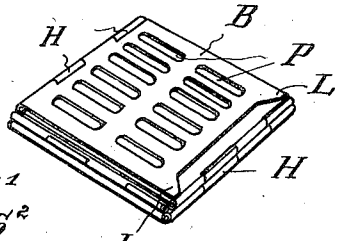


Fig. 3

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UNITED STATES PATENT OFFICE.

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COLLAPSIBLE GRATE.

1,102,649. Specification of Letters Patent. Patented July 7, 1914.

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To all whom it may concern:

Be it known that I, SAMUEL CHARLES HEWLINGS DIX, of 27 Bath road, Cheltenham, in the county of Gloucester, Kingdom of Great Britain, ironmonger, a subject of the King of Great Britain, have invented new and useful Improvements in and Connected with Collapsible Grates, of which the following is a specification.

My invention relates to collapsible grates, and more particularly to light portable cooking grates for field purposes which are collapsible and may be carried in the pocket or haversack and obviate the necessity of preparing the ground for the reception of the fire. By use of the apparatus a small amount of fire can be made to serve the same purpose that a large uncovered fire has hitherto done, and will further enable the pots and pans to be immediately placed upon and around the same without retarding the fire, and by reason of extreme lightness and conformation it may be immediately chilled and folded up for transport.

In the drawings, forming a part of this specification Figure 1, shows a plan of the plates with which I form the device in extension. Fig. 2, is a view in perspective of the grate as it appears ready for use. Fig. 3, is a perspective view of the plates forming the grate in their folded or juxtaposed relation. Figs. 4 and 5 are views similar to Figs. 2 and 3, respectively, of another form of the device constructed according to my invention, Fig. 5 showing the device illustrated in Fig. 4 when folded. Figs. 6, 7, 8 and 9 are fragmentary perspective detail views of the device disclosed in Figs. 4 and 5.

I am aware that combined canteen and water bottle and cooking apparatus for field use has been previously used consisting of a bridge like formation of plain and unperforated metal sheets hinged together and supported in the open position by inserted cross bars, large openings being provided in its top portion to accommodate cooking utensils of a certain size and shape.

In the construction of my grate device I find it most convenient to use thin perforated metal plates A, B, C and E provided with suitable perforations P and according thereto I use two centrally hinged plates which are intended to form the top grid A of grate. To three of the four margins of this top grid I attach, by hinging means H, five other plates, four of which constitute the two side walls B and C, and the remaining one an end wall E. When the said grid A is horizontally raised the end and side plates B, C, and E assume a position at about right angles thereto (bridge like). The hinging means H of the said walls are preferably formed as stop hinges to prevent the plates folding beyond the said position, but when swung over in an opposite direction permit of the close folding in of the plates one upon the other or in juxtaposed relation to each other for convenience in transport. For the purpose of providing vertical rigidity beyond that afforded by the hinging means H, the end wall plate E is arranged to swing beyond a right angle position relatively to the top grid A enabling the side wall plates B and C to find contact with the end wall plate E when erected, the end wall plate thus acting as a stop; and for the further purpose of preventing the grate moving from a desired position and holding the parts in erected relation to each other I have provided the prong-like legs L at the lower edge of the wall which can be pressed into the ground.

Another form of the device is shown in Figs. 4 and 5 wherein the side wall plates B′ and C′, hinged as at H′, and perforated as at P′, are made to fold longitudinally one upon the other and have also prong-like legs L′ for the purposes as aforesaid, but an extensible trellis-like grid X takes the place of the top-grid A of the former device. The ends O of the metal strips forming the grid X are turned down at right angles to alternately engage the inside and outside of the upper edges of the side walls, as clearly shown in Fig. 6, thereby serving to maintain the latter in a substantially vertical position. The grid X is also secured by pivoting at W^1 and W^2 at the one end of each side wall plate, as clearly shown in Figs. 4 and 7, and in extension, by headed studs R engaging slots S^1 and S^2 formed in and at the other end of the side wall plates, as clearly shown in Figs. 8 and 9. When it is desired to fold up the device these studs R must first be disengaged from slots S^1 and S^2 and grid X lifted off side plates B′ and C′ by taking it off from the pivots W^1 and W^2.

Fig. 5 illustrates the form of grate shown in Fig. 4 in its folded position, the plates

B′ and C′ being folded upon one another along their hinges H′ and the grids X are turned down at right angles to alternately engage with their ends O the upper and lower edges of said plates, while their studs R engage the upper and lower edges of said plates.

Although I have described and shown my device in two specific forms, using a stated number of plates, I do not confine myself to such as it is obvious I should at times design the same to suit any special requirements, but in all such cases the characteristics will be maintained.

I claim—

1. A collapsible grate comprising in combination, parallel walls, each comprising wall sections pivoted together vertically, so as to fold to lie in juxtaposed relation to each other, and a trellis-like top grid having pivotal connection with said walls at one end thereof, said top grid including a plurality of cross strips having their ends turned downwardly at substantially right angles to the body of the strip, said down turned ends being disposed in coacting pairs and adapted to lie one at the inner side and the other at the outer side and against said wall sections, to retain said walls in spaced apart parallel relation to each other.

2. A collapsible grate comprising in combination, parallel walls each comprising wall sections pivoted together vertically, so as to fold to lie in juxtaposed relation to each other, and a trellis-like top grid including a plurality of cross strips having their ends turned downwardly at substantially right angles to the body of the strip, said down turned ends being disposed in coacting pairs and adapted to lie one at the inner side and one at the outer side and against said wall sections, to retain said walls in spaced apart parallel relation to each other.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL CHARLES HEWLINGS DIX.

Witnesses:
DALE MARSHALL,
ELEANOR GIBBINS.