Nov. 6, 1923. 1,473,056

A. W. STEEN

CAMP GRATE

Filed Sept. 14, 1922

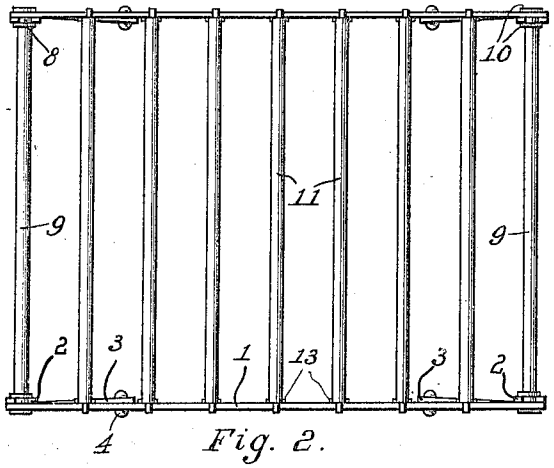


Fig. 2.

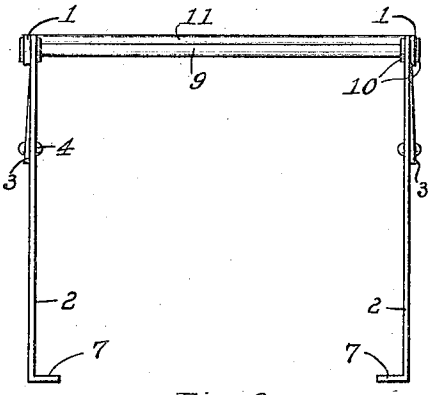


Fig. 3.

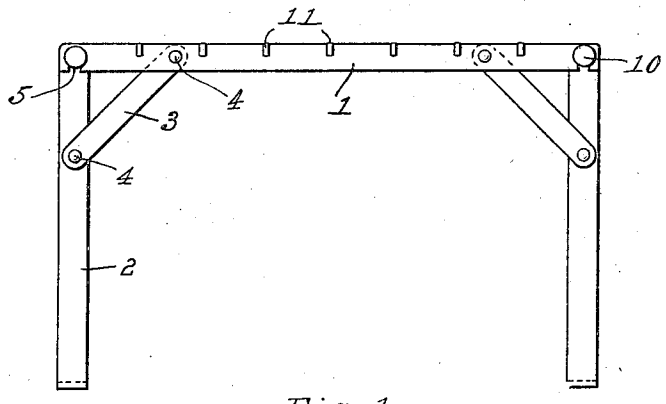


Fig. 1.

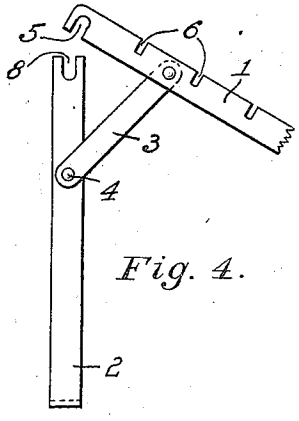


Fig. 4.

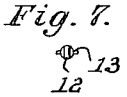


Fig. 7.

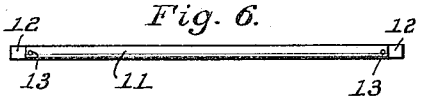


Fig. 6.

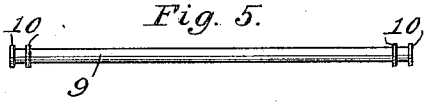


Fig. 5.

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UNITED STATES PATENT OFFICE.

AXEL W. STEEN, OF LOS ANGELES, CALIFORNIA.

CAMP GRATE.

Application filed September 14, 1922. Serial No. 588,168.

To all whom it may concern:

Be it known that I, AXEL W. STEEN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Camp Grates, of which the following is a specification.

My invention relates to improvements in grate structures, and particularly to collapsible, or knock down, grates that are adapted for such purposes as camping.

My objects in this invention are, first, to provide a structure that can conveniently be taken apart, or assembled, in a relatively very short time without the use of bolts, screws, or similar devices; and, second, to accomplish the above in such a manner that the parts may be collapsed and stowed in a minimum of space.

Other objects and advantages will appear hereinafter, and while I show herewith and will describe a preferred form of construction, I desire to be understood that I do not limit myself to such preferred form, but that various changes and adaptations may be made therein without departing from the spirit of my invention as hereinafter claimed.

I attain my objects by the mechanism illustrated in the accompanying drawing in which:

Figure 1 is a side elevation of my grate, completely set up and ready for use; Figure 2 being a plan view, and Figure 3 an end view of the same. Figure 4 is a fragmentary side elevation of one of the side frames showing the manner in which these may be collapsed. Figure 5 is a side view of one of the outside grate bars; Figure 6 is a side view of one of the intermediate grate bars; and Figure 7 is an end view of the latter.

Similar numerals refer to similar parts throughout the several views.

There are two side frames and each of these is made up of rack rails 1, swingingly connected at each end to a leg 2, by means of a link 3. I prefer to use loose rivets 4 in this construction, and each of the parts must be free to swing relatively to the adjacent members.

Rack rails 1 are formed with vertical notches 5 in their lower edges, at each end, and with a series of intermediate notches 6 in their upper edges. The legs 2 have their lower ends turned inwardly to form feet, as at 7, and at their upper ends they are provided with vertical notches 8. The construction of the side frames is best illustrated in Fig. 4.

The round end bars 9 of the grate are best illustrated in Fig. 5. There are a pair of spaced integral flanges 10 at each end of these bars, and the diameter of the bars is such as to fit notches 5 and 8.

The intermediate grate bars 11 are round rods made with slightly flattened ends, as at 12, to loosely fit the intermediate notches 6. In addition I prefer to have dowel pins 13 or some similar device to prevent the bars from slipping longitudinally through the notches in case these are carelessly made too loose, or become so in use.

The grate is assembled as shown in the first three figures, with the notched ends of the rack rails and legs engaged by bars 9 between the respective end flanges 10 thereof. When so set up, gravity will maintain the various members in their proper relative positions.

When knocked down the side frames may readily be so collapsed that the members are contiguously parallel and occupy the minimum of space.

It will be obvious that my device may be used over open fires as a grill or broiler, as well as for a grate for box stoves. It will therefore be particularly useful for camping parties and the like.

I claim as my invention:

1. In a grate structure spaced side frames comprising rack rails having downwardly opening notches at their ends, and legs having upwardly opening notches at their tops; said notches being adapted for engagement by rods spanning said space and said legs being swingingly connected to the respective ends of said rails by links adapted to constitute diagonal braces when said notches are so engaged.

2. In a grate structure spaced side frames comprising rack rails having downwardly opening notches at their ends; legs having upwardly opening notches at their tops and swingingly connected to the respective ends of said rails by links adapted to constitute diagonal braces; and rods adapted to span said space and to simultaneously engage said rail and leg notches in pairs between spaced flanges at the respective ends of said rods.

3. In a grate structure spaced side frames

comprising rack rails having downwardly opening terminal notches and a plurality of upwardly opening intermediate notches; legs having upwardly opening notches at their tops and swingingly connected to the respective ends of said rails by links adapted to constitute diagonal braces; span rods adapted to simultaneously engage said rail and leg notches in pairs between spaced flanges at the respective ends thereof; and a plurality of bars adapted to span said frames and to be positioned by said intermediate notches.

AXEL W. STEEN.