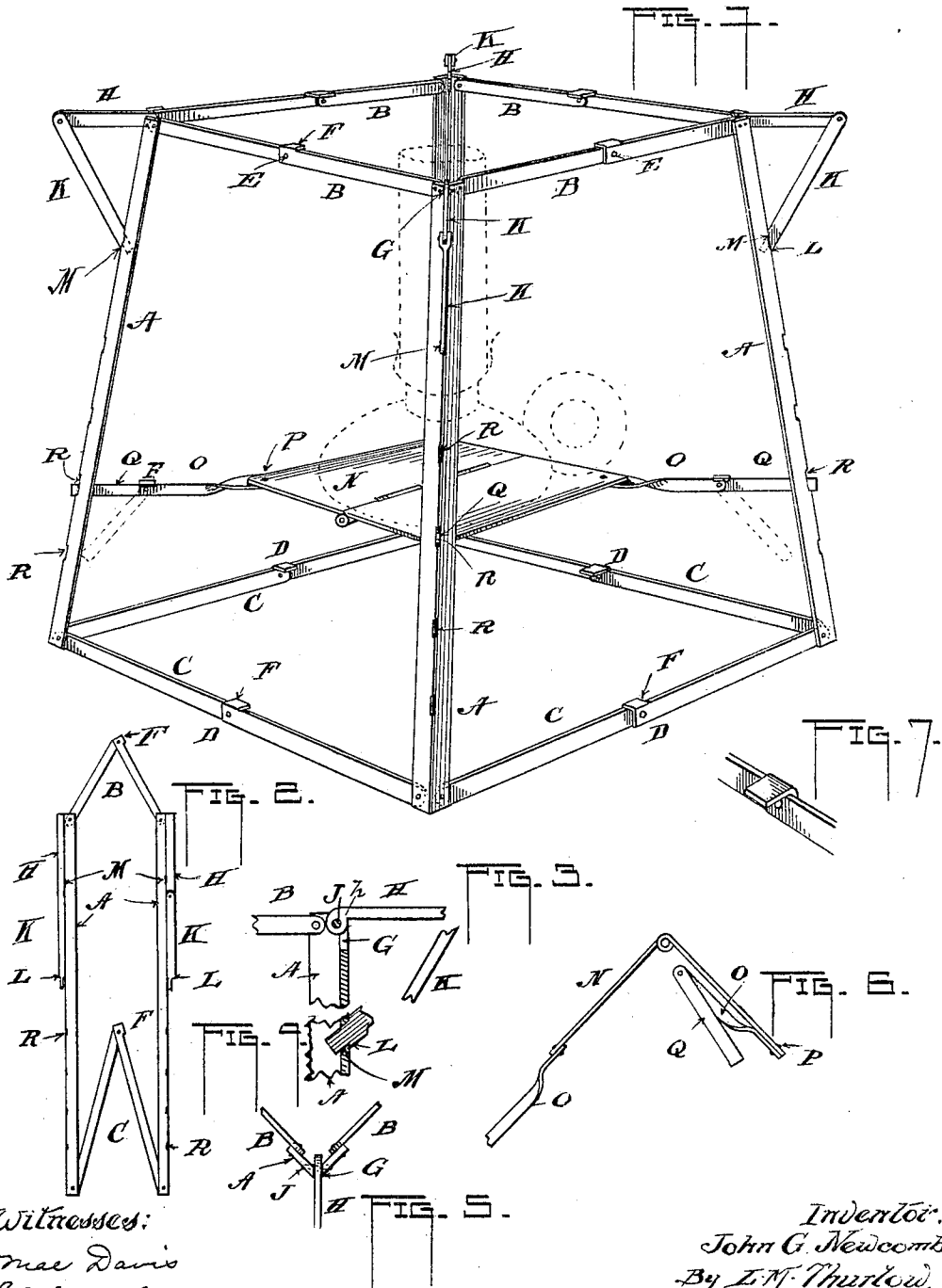


No. 819,916.

PATENTED MAY 8, 1906.

J. G. NEWCOMB.
COLLAPSIBLE HEATING DEVICE.
APPLICATION FILED JUNE 15, 1905.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN G. NEWCOMB, OF PEORIA, ILLINOIS.

COLLAPSIBLE HEATING DEVICE.

No. 819,916.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed June 15, 1905. Serial No. 265,470.

To all whom it may concern:

Be it known that I, JOHN G. NEWCOMB, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Collapsible Heating Devices; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has reference to a device for use in heating water and other liquids at night by the aid of a lamp as the heating agent.

The invention has for its object to provide a simple device that can be adjusted for a lamp of any size for heating water or other liquids within a vessel supported on said device.

The object, further, is to provide a collapsible device for the uses and purposes described that can be contained in a box of small proportions, though the device when extended for use measures quite large.

In the appended drawings, Figure 1 is a perspective view of my device arranged for use. Fig. 2 is a smaller view of the same as viewed from one side and partially collapsed for packing purposes. Fig. 3 is a sectional view of a portion of a corner member, showing the relation of certain members. Fig. 4 is also a sectional view of a portion of one of the corner members, showing a socket and portion of a shouldered member therein. Fig. 5 is a top view of the said corner member, showing the relation of certain folding-arms pivoted thereto. Fig. 6 is an end view of a foldable plate and supporting-arm therefor. Fig. 7 is a perspective view of two portions of a folding member, showing the pivot or point of connection and lock therefor.

My invention comprises four corner members, preferably of angle-iron of the desired length, as at A. These said members together form a square figure connected at top and bottom by jointed members B and C, respectively, the latter being somewhat longer than the former and pivotally connected at substantially the middle, as shown at D, the said members B being likewise pivoted at the middle, as at E, as shown. One of the sections of the members B and C is provided with an integral overhanging lip F, whereby the joint can only be "broken" in one direction—that is to say, the joint can only be

thrown upward, being locked in the other direction by means of said lips, as will be understood. The members B being shorter than the members C causes the device to have a pyramidal form, though of course it may be of rectangular form, if desired. The said members B and C are pivotally connected to the extremities of the corner members A in order that, as shown in Fig. 2, the entire device may be folded together in a compact form. In order to make the folding feature understood, it may be stated that when arranged for use, as shown in Fig. 1, the device measures about twelve inches square at the base and has a height of about eighteen inches, but when folded together the measurement is about four inches square by about twenty inches long and will enter a box of substantially that size. The top of each corner member A is provided with a vertical slot, as at G, Fig. 3, within which is pivoted one end of an arm H by a pin J. At the opposite end of the said arm H another arm K is pivoted, whose free end is reduced in size, leaving a shoulder at L, there being a socket at M in the angle of the member A for receiving said reduced end, as shown in Fig. 4, said socket being so located that the arm H is held in substantially a horizontal position, as shown. As indicated in Fig. 3, the inner pivoted end of the arm H is provided with an enlargement *h*, through which the pin J extends, and so arranged that the arm will lie close to the corner member A when let down, as shown in Fig. 2. I now provide a vertically-adjustable plate N for supporting a lamp, this plate being hinged at the middle, so that it can be folded into one-half the space occupied by it when in use. At each corner of said plate is an arm O, pivoted at P, to which in turn is pivoted an extension Q, adapted to enter an opening R in the corner member, as shown, whereby the plate is supported, as shown. In order that this may be made possible, the joint of the arms O and Q are provided with the overhanging lip S, corresponding to F of the members B and C described. This prevents the arms moving on their pivots when a lamp is rested upon the plate N.

It will be seen that a series of the openings R are provided in each corner member A, so that the plate N described can be stationed at any height desired to suit the size of the lamp, it being desirable to have the top of the lamp-chimney as near the vessel to be heated

as is possible in order to heat the contents as rapidly as possible. The arms Q can be easily and quickly entered into the openings R by moving them on their pivotal connections, that movement allowing the plate also to be quickly removed from the device for folding. It will be noted that in Fig. 6 the plate is being folded and also that the arms or members O and Q are folded together and swung on their pivots, so as to lie between the plate-halves when folded. In this way I am enabled to reduce the said plate and its fitting to a size to easily enter the box which contains the main portion of the device, as described.

In the use of the bracket-supports H K a vessel of very large size may be set upon the device, although I may not use said brackets, as the top of the arrangement may be made large enough to support any vessel that it may be desired to use. By using the overhanging lips F and S described it may be seen that the members provided with them are not in danger of sagging and allowing the device to collapse voluntarily. As a matter of fact I may make various changes in my device as I see advantageous without departing from the spirit of the invention. As a matter of fact the plate N may be omitted, if desired, and the lamp may be set upon the table or other support on which the device rests, or if the lamp is a small one some object may be used on which to set the lamp. Thus it is seen that the use of the plate is not an absolute necessity.

I claim—

1. A foldable stand for the purposes described comprising the legs, jointed members for connecting all of the legs at top and bottom to form a complete frame, said jointed members permitting the legs to close together parallel with each other said members all folding in the same direction as illustrated.

2. In a stand for the purposes described, a series of legs, jointed members connecting all of the legs at top and bottom as shown, a jointed foldable arm on each leg adapted to be raised upon the leg to form a support as described.

3. In a stand for the purposes described, a series of legs forming a pyramidal frame, jointed members connecting all the legs at top and bottom and arranged to fold upon themselves as shown to permit the legs to lie parallel with one another in close order and a jointed bracket pivoted at the top of each leg and adapted to collapse or be raised for supporting purposes substantially as described.

4. A stand for the purposes described comprising a series of legs, jointed foldable

members connecting all of the legs at top and bottom as shown and a collapsible member within and supported by the legs and adjustable for height and having collapsible supporting-arms by which to adjust said member within the legs as described there being a series of holes in the legs for receiving the free ends of the said supporting-arms.

5. A stand for the purposes described comprising a series of legs arranged to form a pyramidal frame, a series of jointed connecting members for the top and bottom of the frame for holding the legs normally rigidly separated, a jointed arm pivoted to each leg at the top to form a support as described, a collapsible support adjustable within the frame, a jointed arm pivoted at each corner of the support, there being a series of holes in the legs for receiving the ends of the said jointed arm as described and shown.

6. In a device of the character described, a series of standards or uprights, a series of jointed members connecting the upper ends and a series of members for connecting the lower ends of the uprights and adapted to fold to permit the latter to approach one another in close relation for the purposes set forth, in combination with a foldable detachable member adjustable for height within the uprights substantially as set forth.

7. In a device of the character described, a series of uprights, a series of jointed members connecting the tops of the uprights, a series of jointed members connecting the lower ends thereof for permitting the uprights to fold together in the manner set forth, and a series of jointed members also for the upper ends of the uprights and pivoted thereto and adapted to form a support for an article upon the top of the standards the same being collapsible for the purposes explained.

8. In a device of the character described, a series of uprights, a series of jointed members connecting the tops and bottoms of the uprights and adapted to permit the uprights to close together in the manner explained, a collapsible bracket at the top of each upright adapted to be raised to form a support, in combination with a foldable member located within the uprights and adjustable for height, there being a series of openings in the uprights by which said foldable member may be adjusted.

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

JOHN G. NEWCOMB.

Witnesses:

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L. M. THURLOW.