March 18, 1958 C. S. LUCE ET AL 2,827,004

PORTABLE A-BOMB SHELTER

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Fig. 1

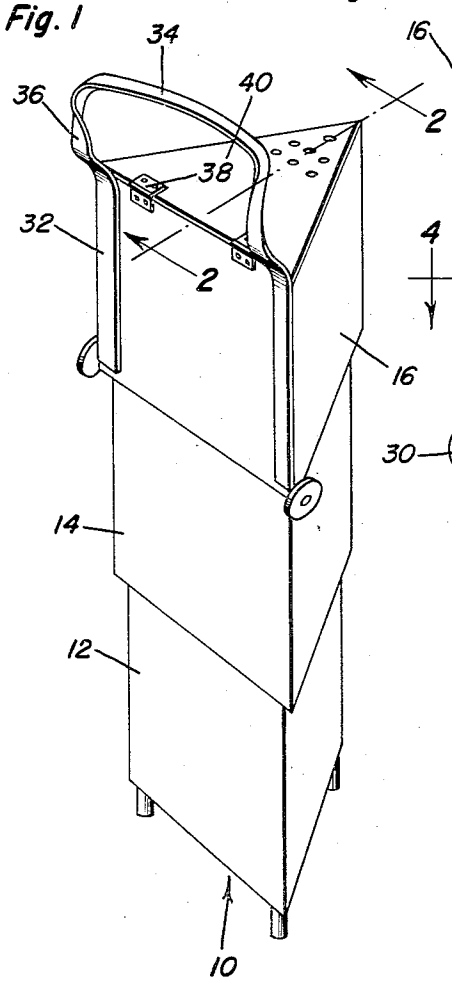


Fig. 2

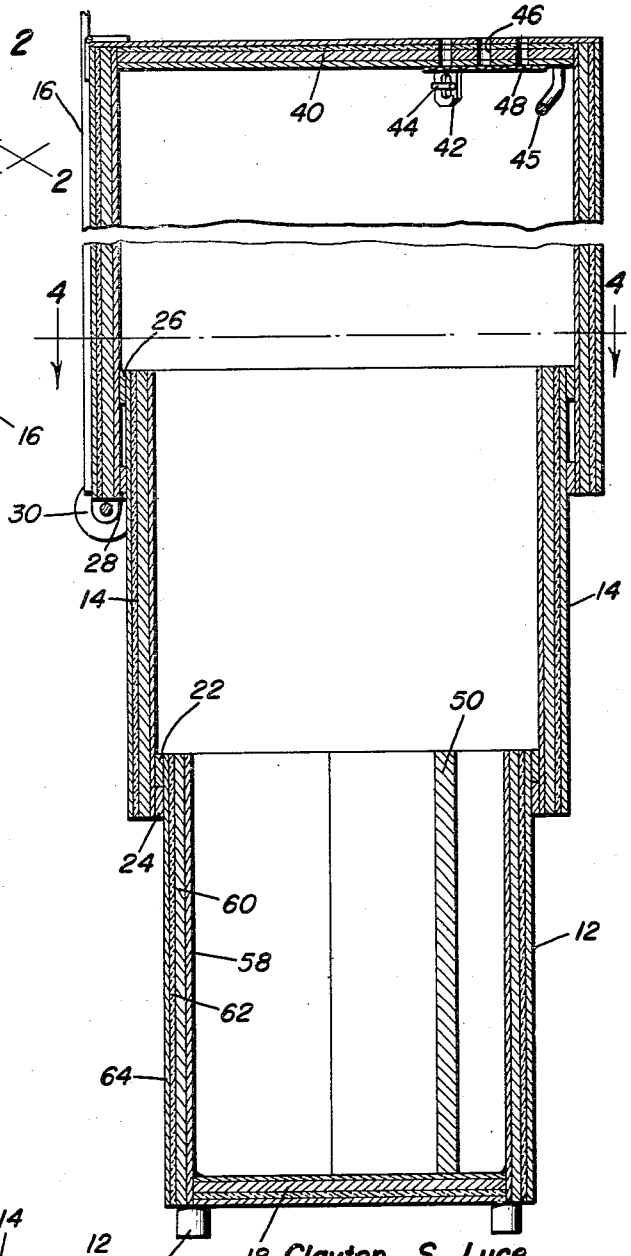
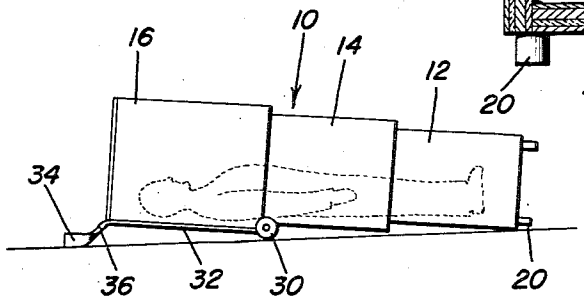


Fig. 3



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Fig. 4

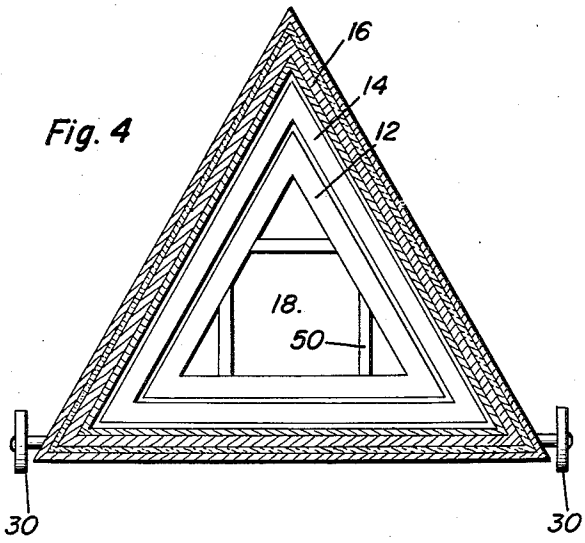


Fig. 5

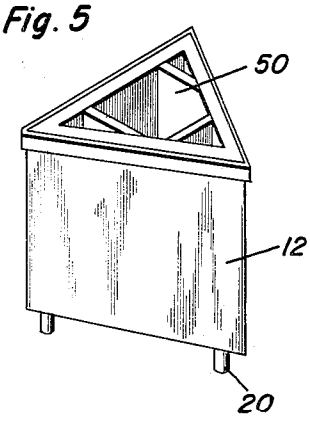


Fig. 7

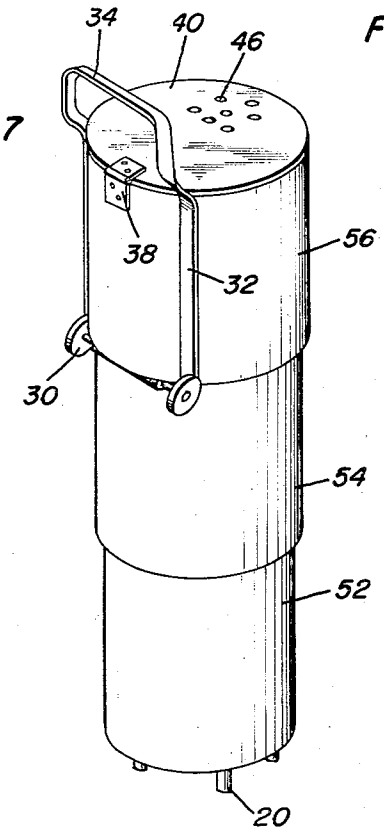
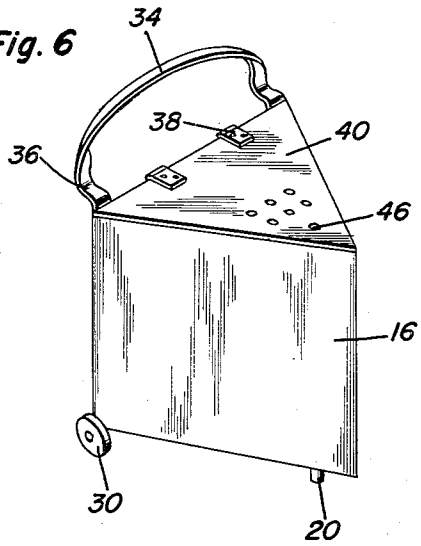


Fig. 6



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United States Patent Office 2,827,004 Patented Mar. 18, 1958

2,827,004

PORTABLE A-BOMB SHELTER

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Application June 21, 1955, Serial No. 516,978

3 Claims. (Cl. 109—1)

This invention generally relates to a shelter, and more specifically provides a portable bomb shelter especially adapted for use in protecting individuals from injury as a result of atomic bomb blasts.

An object of the present invention is to provide a bomb shelter which is portable and provided with a plurality of telescopic tubular sections which, when extended, will receive a person normally positioned in a reclined position for protection against the damaging forces released by an atomic bomb explosion.

Yet another important object of the present invention is to provide an atomic bomb shelter which protects a person (provided they are not too close to the center of the explosion) from harmful effects of radiation, concussion pressure and flying debris.

Other important objects of the present invention reside in its simplicity of construction, portability, strength and rigidity, ventilation by use of decontaminating filters, adaptation for its specific purpose and its relatively inexpensive manufacturing cost.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view illustrating the portable A-bomb shelter of the present invention;

Figure 2 is a longitudinal, vertical sectional view taken substantially upon a plane passing along section line 2—2 of Figure 1 illustrating the details of construction of the shelter of the present invention;

Figure 3 is a side elevational view illustrating the shelter of the present invention disposed in its normal operative position;

Figure 4 is a transverse, vertical sectional view taken substantially upon a plane passing along section line 4—4 of Figure 2 illustrating the details of construction of the device;

Figure 5 is a perspective view of the bottom section of the shelter of the present invention illustrating the reinforcing members therein;

Figure 6 is a perspective view of the shelter of the present invention in collapsed position; and

Figure 7 is a perspective view illustrating a cylindrical form of the A-bomb shelter of the present invention.

With reference to the accompanying drawings, the numeral 10 generally designates the bomb shelter of the present invention including a plurality of hollow and tubular sections 12, 14 and 16 with the section 12 being the bottom member and provided with a rigid closure 18 together with a plurality of depending supporting legs 20 attached thereto. The upper end of the lower section 12 is provided with a peripheral extending projection 22 for interlocking engagement behind an inwardly extending peripheral projection 24 on the lower end of the central tubular member 14. Likewise, the upper end of the central tubular member 14 is provided

with an outwardly extending peripheral projection 26 for engagement behind an inwardly extending peripheral projection 28 on the lower end of the upper tubular member 16.

The lower end of the tubular member 16 is provided with a pair of ground engaging supporting wheels 30 for employment when the bomb shelter 10 is in collapsed position.

A generally U-shaped handle 32 is secured to the upper tubular member 16 and is provided with a bight portion 34 which is offset from the remainder of the handle 32 by angulated portions 36 wherein the bight portion 34 forms a rest for the upper section 16 when the shelter 10 is positioned in substantially horizontal relation.

A pair of hinge members 38 pivotally support an openable closure 40 having a depending latch 42 thereon for engagement with a keeper 44 on the inner surface of the upper tubular member 16. Also, a U-shaped handle 45 is provided on the inner surface of the pivotal closure 40 for manipulation thereof from the interior thereof. A plurality of ventilating apertures 46 are provided in the closure top 40, and a suitable filter screen 48 may be provided for decontaminating any air admitted through the openings 46, thereby assuring a supply of uncontaminated air to the person disposed within the bomb shelter 10.

The lowermost section 12 is provided with reinforcing plates 50 which form generally a polygonal or rectangular interior wherein the lower section 12 is greatly rigidified by these reinforcing plates 50.

Figure 7 illustrates a form of the invention wherein three cylindrical sections 52, 54 and 56 are utilized, and the other structural details are identical to those employed in Figures 1–5. Also, a semicylindrical arrangement may be used or any other desired shape other than the triangular and cylindrical shapes, as illustrated.

Each of the sections 12, 14 and 16 is provided of layered or laminated material including an inner lining 58 of fiber, a layer of plywood 60, a sheet of asbestos 62, and finally, a covering or coating of aluminum 64, thereby resisting radiation and heat of bomb explosions. It will be understood that the device will be constructed in various sizes to accommodate persons having various size requirements.

In normal operation, a person opens the top 40 when the device is in collapsed position, as illustrated in Figure 6, and the sections are pulled up in enclosing relation to the person standing in the sections 12, 14 and 16. The frictional contact between the projections 22 and 26, respectively, against the inner surfaces of the central and upper telescopic members 14 and 16 will retain the members in extended position or, if desired, a positive latch mechanism may be provided. After the sections 12, 14 and 16 have been extended, the person in the device, by shifting his weight, may tilt the device backwards to a position illustrated in Figure 3. If desired, suitable cushioning means may be provided to prevent accidental injury during this operation.

The normal functioning position of the bomb shelter is illustrated in Figure 3, and the triangulated or cylindrical construction of the device is such that objects will glance off thereby eliminating injury to the person by flying debris as normally occurs in bomb explosions.

The device of the present invention is portable in nature and extremely simple and rugged in construction and will form a shelter capable of withstanding the shock waves and radiation caused by the explosion of an atomic bomb or the like.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention

to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A portable bomb shelter comprising an elongated hollow member having one closed end and an openable closure at the other end for permitting access into said hollow member, and means for supporting said other end of the hollow member in elevated relation with the openable closure elevated above the closed end whereby a person disposed with his head towards the openable closure will normally be supported in an inclined reclining position, said hollow member being composed of a plurality of telescopic tubular sections for collapsing into compact conditions, said hollow member having a plurality of reinforcing members disposed therein.

2. A portable and collapsible shelter comprising a plurality of enlarged telescopic tubular sections, supporting wheels on one of said sections for engaging the ground when the sections are collapsed to a compact condition, a handle on one of said sections for moving the collapsed device over the ground surface on the supporting wheels, a pivotal closure for the end of the section remote from the wheels, a closed end on the lower section thereby forming an enclosure for a person, said pivotal closure having latch means on the interior thereof and means for providing uncontaminated air to the interior of the sections.

3. A portable bomb shelter comprising an elongated hollow casing including a plurality of telescopic sections for collapsing the casing to a compact condition with the inner sections being substantially completely telescoped within the outer section, supporting wheels on the lower end of the outer section for contact with the ground surface when the sections are collapsed, handle means on the upper end of the outer section for moving the collapsed casing on the supporting wheels, said handle means projecting laterally for supporting one end of said casing in elevated position when the sections are extended and the casing is disposed in substantially horizontal position, the upper end of the outer section having a pivotal closure for permitting a person to enter and egress from the casing when the casing is disposed in the horizontal position whereby the person will be supported in inclined relation in the casing, said casing being rigid for protecting the occupant from a bomb explosion.

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