

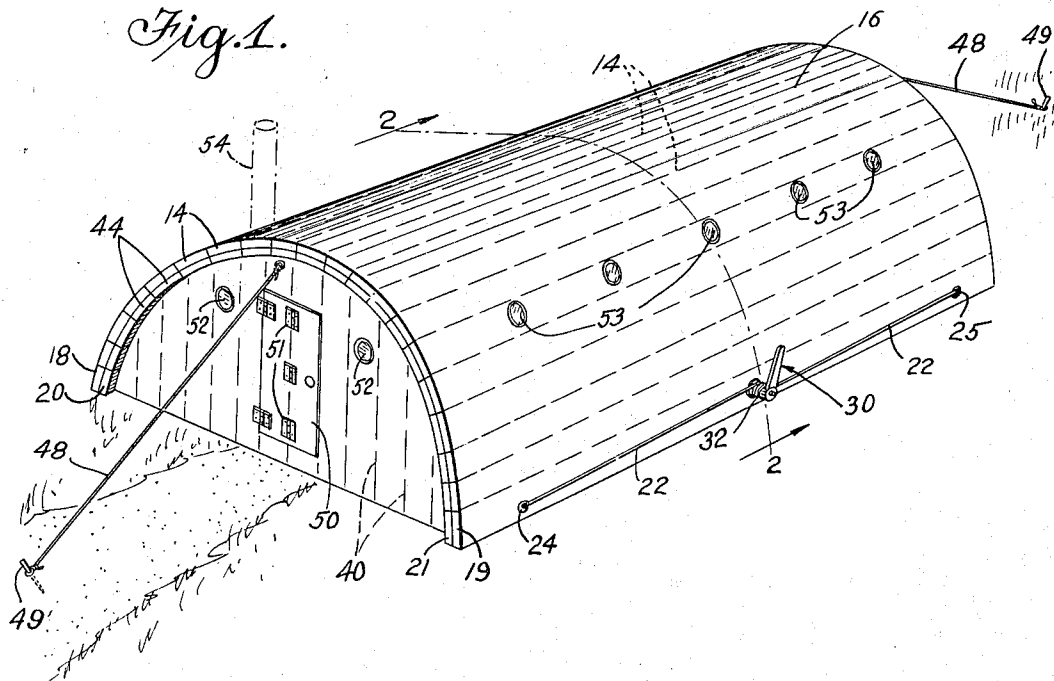
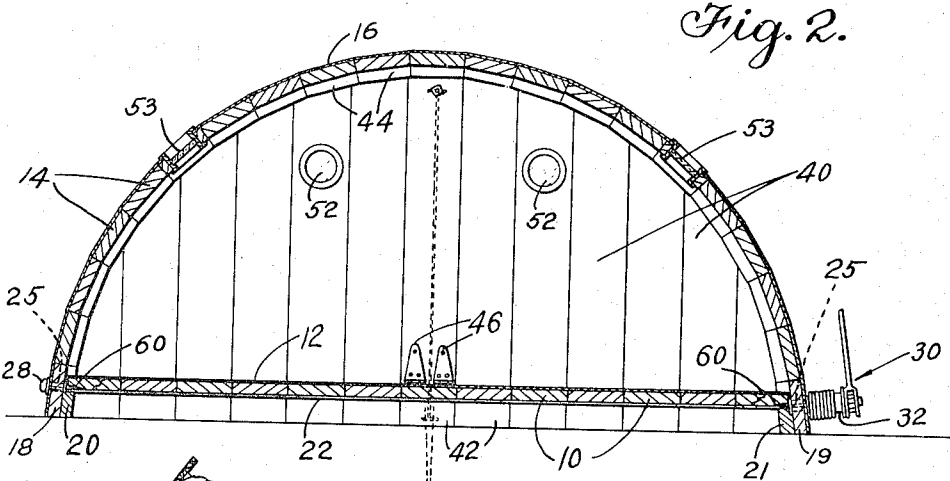
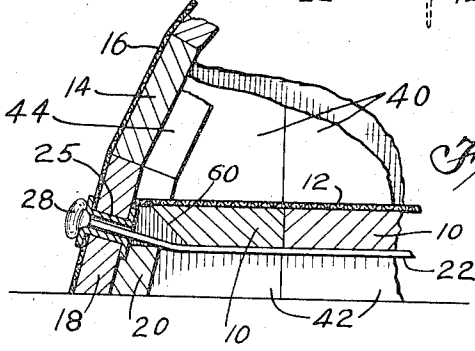
Feb. 7, 1956

J. J. DOMAN ET AL
KNOCKDOWN BUILDING

2,733,482

Filed May 12, 1954

2 Sheets-Sheet 1



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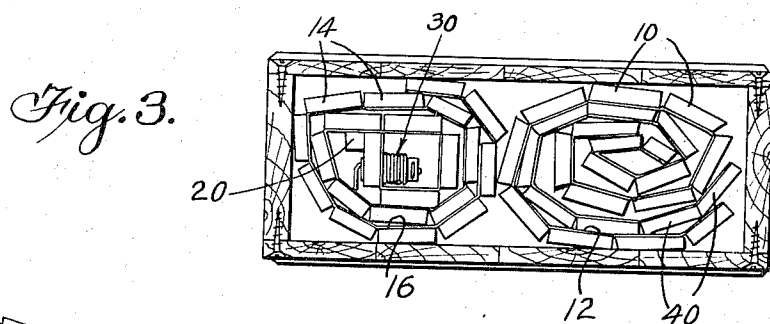
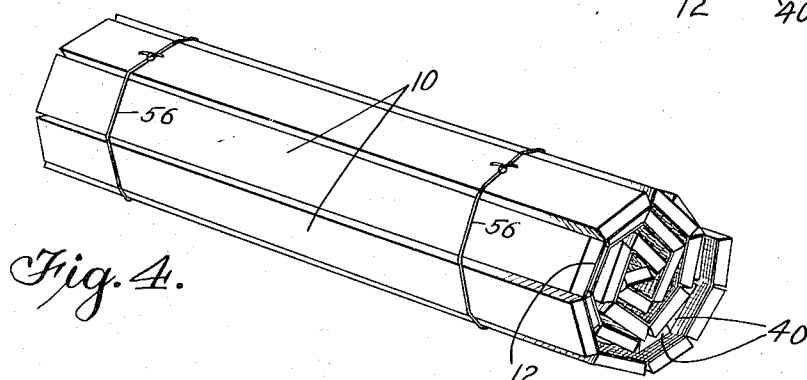
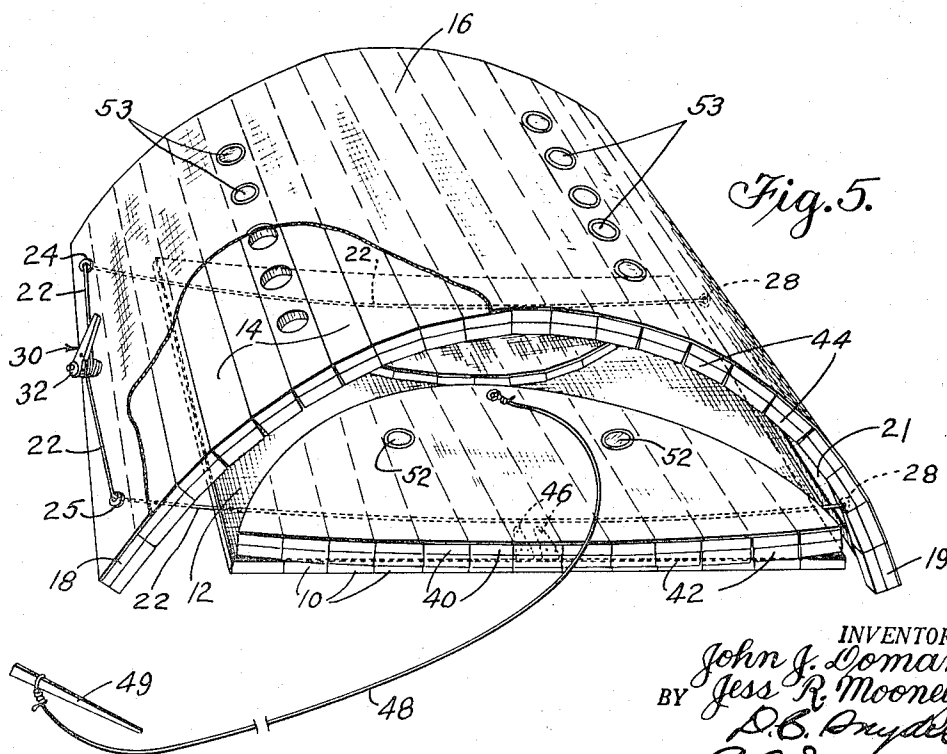
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KNOCKDOWN BUILDING

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2 Claims. (Cl. 20—2)

(Granted under Title 35, U. S. Code (1952), sec. 266)

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

This invention relates to buildings of the knockdown class, in which the parts are adapted to be packed into bundles or crates for transportation to the site where the building is to be erected.

An object of the present invention is to provide an improved structure of the type indicated, having increased utility and efficiency.

Another object of the invention is to provide an improved knock-down building which can be erected and knocked down in minimum time and without the use of special tools.

Other objects and many of the attendant advantages of this invention will be readily appreciated as the same becomes better understood by reference to the following description.

Fig. 1 is a perspective view of an erected building which embodies the present invention;

Fig. 2 is a sectional view of the same, taken on the line 2—2 of Fig. 1;

Fig. 3 is a view in end elevation showing the building in knocked-down and crated condition;

Fig. 4 shows the floor in rolled condition;

Fig. 5 is a perspective view showing the building in process of erection; and

Fig. 6 is an enlarged sectional view showing a detail.

The building comprises chiefly a rectangular floor section, a semi-cylindrical roof section, and two semi-circular end wall sections. The floor section comprises a plurality of planks or panels 10 in side-by-side relation and secured together by canvas or other flexible material 12 which serves to hinge the planks together to permit their being formed into a roll or bundle as indicated in Fig. 4. The material 12 also serves to obstruct the passage of air through any spaces which may exist between adjacent planks.

The roof section comprises a plurality of planks 14 secured together by flexible material 16 in a manner similar to the floor planks, but having their contiguous surfaces slightly beveled to permit them to be brought into the semi-cylindrical shape indicated in Figs. 1 and 2. The lowermost roof planks, indicated at 18, 19, rest upon the ground and thus form sills for the structure. The inner surface of the roof section is formed with cleats 20, 21 to support the edges of the floor and maintain it a suitable distance above the ground. Beneath the floor, two or more flexible tension members 22 extend between the planks 18, 19 to maintain the roof in the arched shape shown. As shown, the members 22 are in the form of two cables which pass through grommets 24, 25 in the planks 18, 19, being secured at one side of the structure by lugs or the like 28, while at the other side of the structure their ends are brought through a tightener 30 of known type which upon the handle thereof being moved back and forth will reel the cables upon a mandrel as indicated at 32.

The end sections are likewise made up of planks 40 secured together by flexible material and shaped to the semi-circular form indicated. The lower ends of planks 40 are designed to rest upon the ground, and are pro-

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vided with cleats 42 to receive the forward and rear ends of the floor section. In addition, cleats 44 are secured to the inner surface of the roof section to limit outward movement of the end sections. Preferably the flexible material which secures the planks of the end sections together is on the outside of said end sections, to counteract any tendency of said sections to bulge outwardly. The end sections are hinged at their middle to the floor section by hinges 46, and are provided with lanyards 48 for raising them to and maintaining them in position by means of stakes 49 or the like, as shown.

One of the end sections may be provided with a door 50 the individual planks of which are preferably hinged together as indicated at 51, to permit the door to be folded along with the remainder of the end section. Portholes or windows 52, 53 may be inserted in the planks of the end walls and roof section. Other features such as a smokestack 54 may be provided.

For shipment, the various sections of the structure may be rolled into bundles and secured in any suitable manner, as by ropes 56. In addition, the rolled sections may be crated, as indicated in Fig. 3.

In setting up the building, the parts may be arranged in the general manner indicated in Fig. 5, with the floor section lying on the ground, the end sections lying on the floor section, the roof section lying flat on the end sections, and the cables 22 passing beneath the floor sections, which are cut away at their edges as indicated at 60 to accommodate the cables without binding. Manipulation of the tightener 30 will then exert tension on the cables, causing the roof section to arch upwardly to the position shown in Fig. 5, wherein the floor section is supported by the cables in approximately its final position. The end sections may then be drawn to vertical position, wherein their cleats 42 support the ends of the floor section, and secured by stakes 49. Further manipulation of tightener 30 will then cause the edges of the floor section, guided by cables 22, as indicated at Fig. 6, to come to rest upon the longitudinal cleats 20, 21.

The hut may be dismantled by reversing the steps just described.

Obviously many modifications and variations of the present invention are possible in the light of the above teachings. It is therefore to be understood that within the scope of the appended claims the invention may be practiced otherwise than as specifically described.

What is claimed is:

1. A collapsible hut comprising, in the erected condition, a roof section having an approximately semicylindrical form, a floor section, and two approximately semicircular end sections disposed within and under and in supporting relation to the roof section, each of said sections being formed of planks, flexible fabric securing the planks of each section together in edge-to-edge relation to permit limited hinging action therebetween, a flexible cable passing beneath said floor section and having its ends secured to the lower edges of the roof section, and a tightener exerting tension in said cable.

2. The invention defined in claim 1, wherein the fabric is applied to the outer surfaces of the planks of the roof section and said planks are radially beveled at their contiguous edges.

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