April 4, 1944. F. G. MANSON ET AL 2,345,616

AERIAL DELIVERY GUN CONTAINER

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Fig. 1

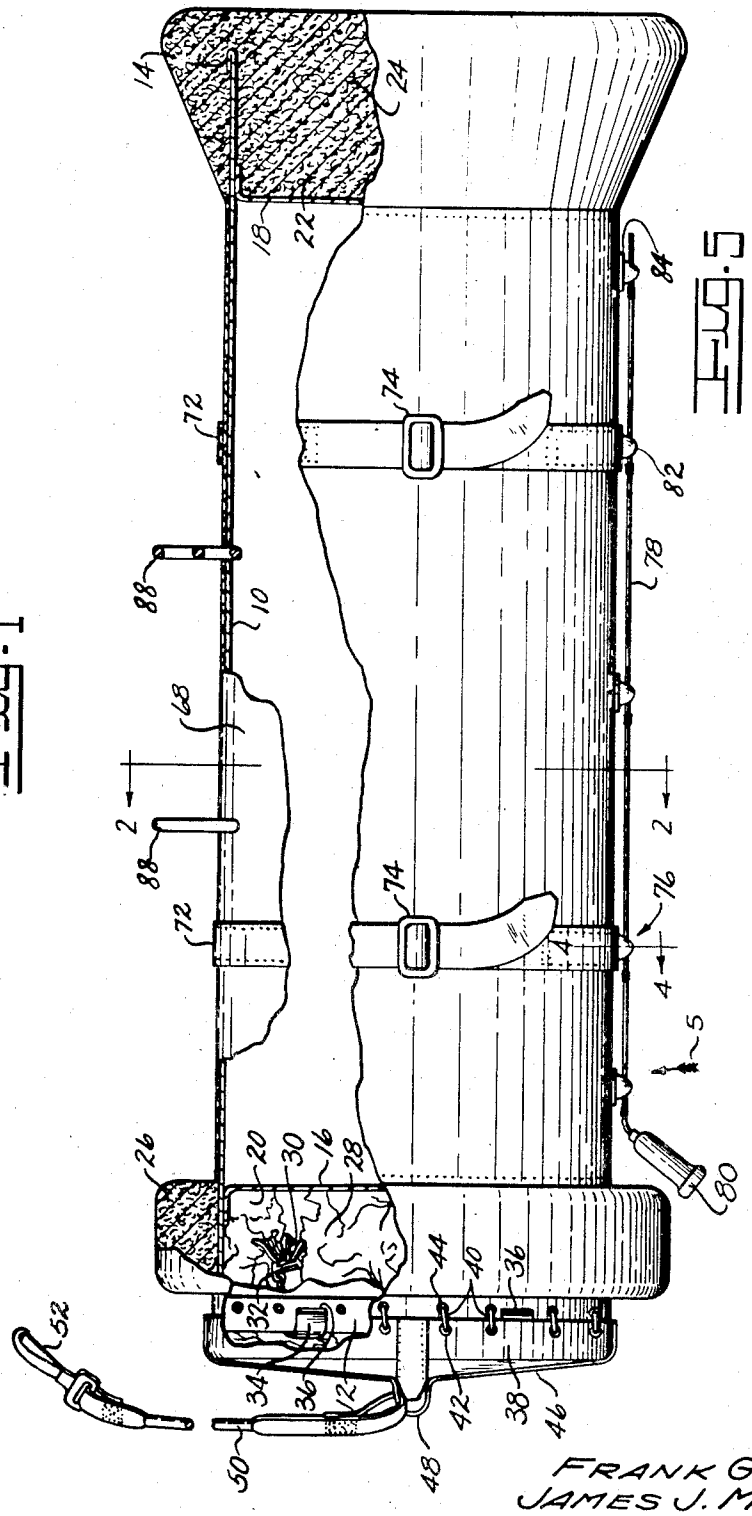
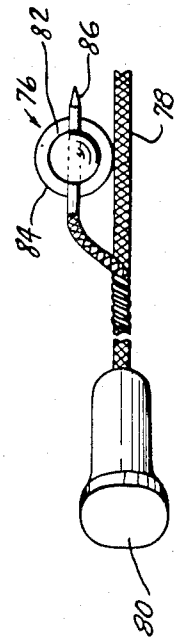


Fig. 5



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Fig. 2

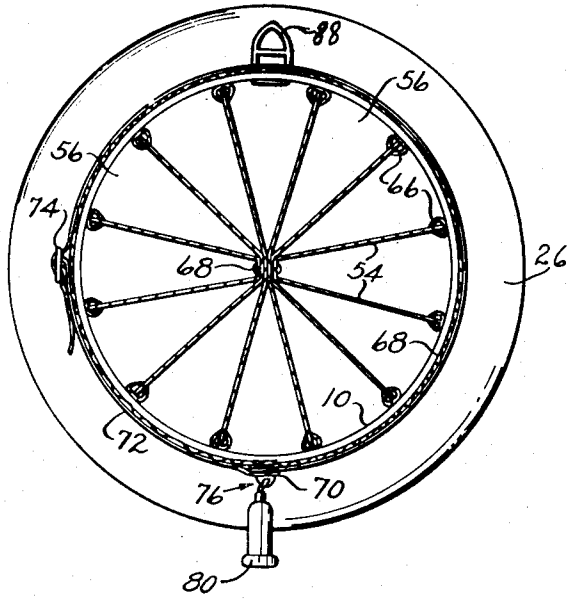


Fig. 3

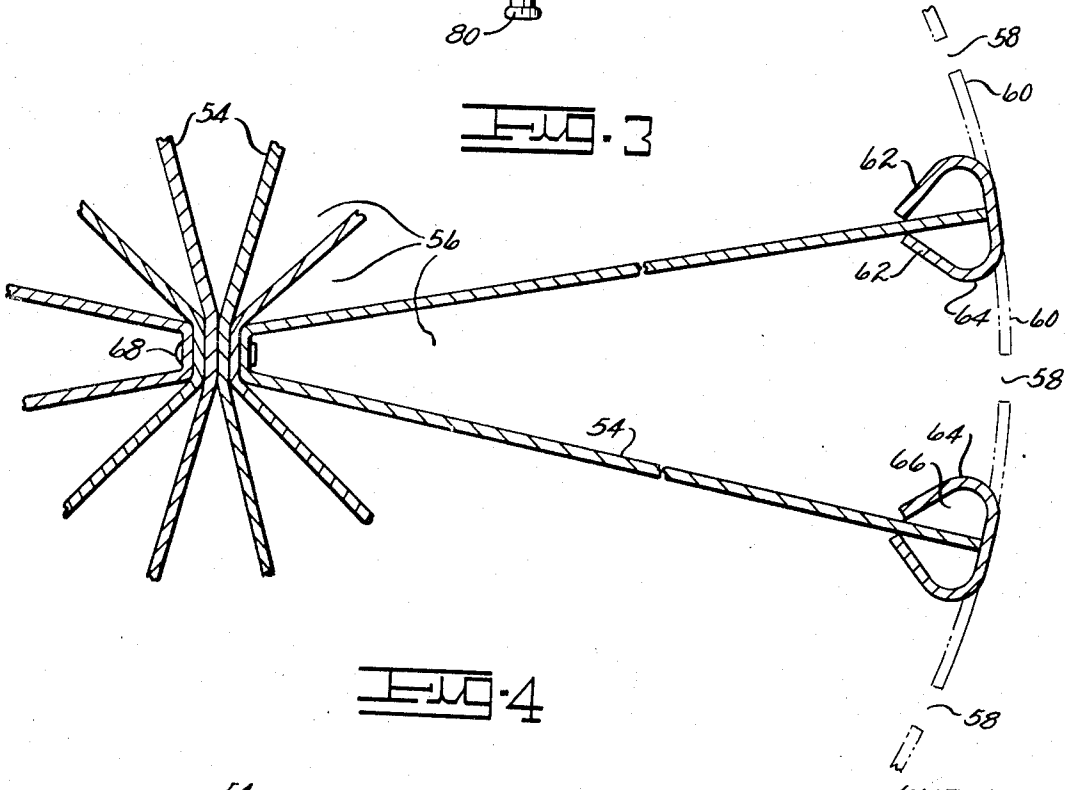
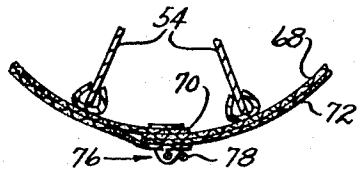


Fig. 4



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UNITED STATES PATENT OFFICE

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AERIAL DELIVERY GUN CONTAINER

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Application April 25, 1942, Serial No. 440,484

6 Claims. (Cl. 244—137)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for Government for governmental purposes, without the payment to us of any royalty thereon.

This invention relates to aerial delivery apparatus, and particularly to a parachute borne container for housing rifles or machine guns so that they may be dropped safely from a moving aircraft to the ground.

An object of the invention is to provide a device of this kind which is of simple design and low cost and which will lend itself to quantity production.

Another object is to so construct and arrange the apparatus as to afford maximum protection to the articles being dropped.

Another object is to so construct the device as to insure its capacity to withstand the severe shocks incident to its use.

Another object is to so associate the container and parachute as to insure positive and safe operation at all times.

Other objects and advantages may be seen as the following detailed description is read and reference is made to the drawings, wherein,

Fig. 1 is an assembled view of the apparatus as it would appear when loaded and ready to be launched, a portion being broken away to show the construction.

Fig. 2 is a transverse section taken at 2—2 of Fig. 1 to show the container construction.

Fig. 3 is a detail view of the container partition construction.

Fig. 4 is an enlarged fragmentary view of a portion of Fig. 2 showing the pin and cone fastening means.

Fig. 5 is an enlarged fragmentary view of the pin and cone fastening means viewed in the direction of the arrow 5.

Like reference characters refer to like parts throughout the several views.

The body of the container is in the form of a long cylinder 10 which may preferably be made by bending a flat rectangular sheet to cylindrical form and welding the abutting edges together. The top and bottom edges are lapped back upon themselves to respectively form the rims 12 and 14.

Within the cylinder 10 and spaced a short way from the top and bottom edges are the flanged heads 16 and 18, the peripheries of which may preferably be spot welded to the cylinder to hold them in place. The manner in which the heads 16 and 18 are set back from the ends of the cylinder provides cup shaped receptacles 20 and 22 in the top and bottom respectively.

The bottom cup shaped receptacle 22 is taken up by a bumper 24 which also surrounds the outside of the cylinder. The bumper may be made of any suitable material such as felt or the like and may be cemented or otherwise held in place. A ring bumper 26 of the same material surrounds the cylinder near the upper edge and may also be cemented or otherwise fastened in place. The ring bumper 26 is provided to take the shock when the container lands on its side.

Packed in the upper receptacle 20 is a parachute canopy 28, the shroud lines of which are divided into four groups, one group being shown at 30. The groups 30 are attached to D rings 32 from which short parachute risers 34 extend to the upper edge 12 of the cylinder, the ends being secured in slots 36.

A flexible fabric cover 38 is fitted over the upper edge 12 of the cylinder to enclose the parachute, the cover being held in place by a lacing of break thread 40 which passes through the two circular rows of eyelets 42 and 44 in the cover and cylinder respectively. A break cord, not shown, connects the top of the canopy 28 to the underside of the cover 38 at their centers in the usual manner. Reinforcing webbing 46 is stitched across the top of the cover, a loop of webbing being thrown up at 48. A static line 50 has one end secured in the loop 48 and the free end provided with a spring snap 52 for connection to the anchor line on the aircraft.

The space within the cylinder 10 intermediate the heads 16 and 18 is divided by a series of substantially radial partitions 54 into a number of gun compartments 56. In order to provide ready access to the compartments 56, a series of narrow slots 58 (see Fig. 3) are cut through the cylinder wall, one entering each compartment, the slots extending from the bumper 24 to the bumper 26.

The narrow slots 58 are then widened by turning in the edges 60 of the slots as at 62 which not only provides large openings, as between the edges 64, through the cylinder wall but forms a series of channel beams 66 in the outer wall which greatly strengthen the cylinder. The partitions 54 are formed two in a sheet and the sheets are riveted together in the center as at 68, Fig. 3. By riveting together all of the partitions as here shown, prior to their entry into the cylinder, the partition assembly may be slid endwise into the cylinder with the edges of the partitions between the sides 62 of the channel beams

66. This must, of course, be done while one or the other of the heads 16 or 18 has not yet been put into place in the cylinder. By welding the edges of the partions 64 to the channels 66, the structure is further strengthened.

As a quick removable closure for the access openings 64, a rectangular piece of fabric 68, which may be canvas or a similar material and as long as the space between the bumpers 24 and 26, is brought around the cylinder 10, the edges being lapped over each other as at 70. Straps of heavy cotton webbing 72 are stitched to the fabric except that they may be left unstitched adjacent the buckles 74, the buckles being provided to snug the straps and fabric up close to the cylinder 10. The lapped over edges 70 are secured together by means of a series of cone, eyelet, and pin fasteners 76 (see Fig. 5) the cones 82 being spaced along one edge of the closure and the eyelets 84 along the other edge and in the ends of the straps 72, all of the pins 86 being simultaneously withdrawable by a cable 78 and handle 80 whereby a single pull on the handle 80 frees the lapped over edges of the fabric cover 68 and the lapped over ends of the straps 72. Removal of the fabric closure 68 provides access to all of the compartments 56.

Two spaced apart D rings 88 are fastened to the metal cylinder 10, the fabric closure 68 being slitted to let these rings through. The operation of the device is as follows:

A number of rifles or machine guns, each in an individual padded case, are placed one in each of the compartments 56 and the fabric closure 68 wrapped around it and secured with the fasteners 76. This may preferably be done by standing the container in an upright position on the bumper 24.

With the parachute packed as shown in Fig. 1, it is hung by the D rings 88 on to the bomb rack of an airplane, the snap 52 of the static line being secured to an anchor on the plane. At the desired place, the bomb rack hooks are released and the container drops. The static line 50 now tautens whereby the break threads 40 are severed. The canopy apex being secured to the underside of the cover 46 by a break thread (not shown) is lifted out of the receptacle 20 until it is out full length, whereupon the thread also breaks, leaving the canopy free to open and bring the container down slowly. The static line 50 and the cover 48 remain attached to the plane. When the container lands, a single pull on the handle 80 frees the edges of the closure 68 and it may be removed, thus exposing all of the rifles to ready access.

Having described our invention, we claim:

1. An aerial delivery gun container comprising, a tubular body, a head secured in said body far enough from the upper end to provide a receptacle in said body above said head for packing a parachute, a lower head in said body, and a series of substantially radial partitions in the space between said heads dividing said space into a series of gun compartments, each said gun compartment being provided with a separate access opening extending through the wall of said body.

2. The structure defined in claim 1 including quick action means for opening all of said gun compartments simultaneously.

3. The structure defined in claim 1 including a single closure for all of said access openings comprising a rectangular piece of fabric brought around the container body over said access openings, and a quick opening fastening means for holding said closure in place over said access openings.

4. The structure defined in claim 1 including a single closure for all of said access openings comprising a rectangular piece of fabric brought around the container body over said access openings with the edges overlapping, and a series of eyelet, cone and pin connections wherein the pins are all connected to a single cable for simultaneous removal.

5. The structure of claim 1 including a resilient bumper member secured to the bottom of the lower head and to the inside and outside of the cylinder and a second resilient bumper member in the form of a ring surrounding and secured to the body in the region of the parachute.

6. The structure of claim 1 wherein the longitudinal edges of the access openings are turned inward to form stiffening beams for the said body, and the outer edges of the partitions are held between said inturned edges.

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