Aug. 12, 1958 B. SRIBNY 2,847,174

RELEASABLE AIRPLANE CHAIR WITH PARACHUTE

Filed Oct. 23, 1956 2 Sheets-Sheet 1

FIG. 1.

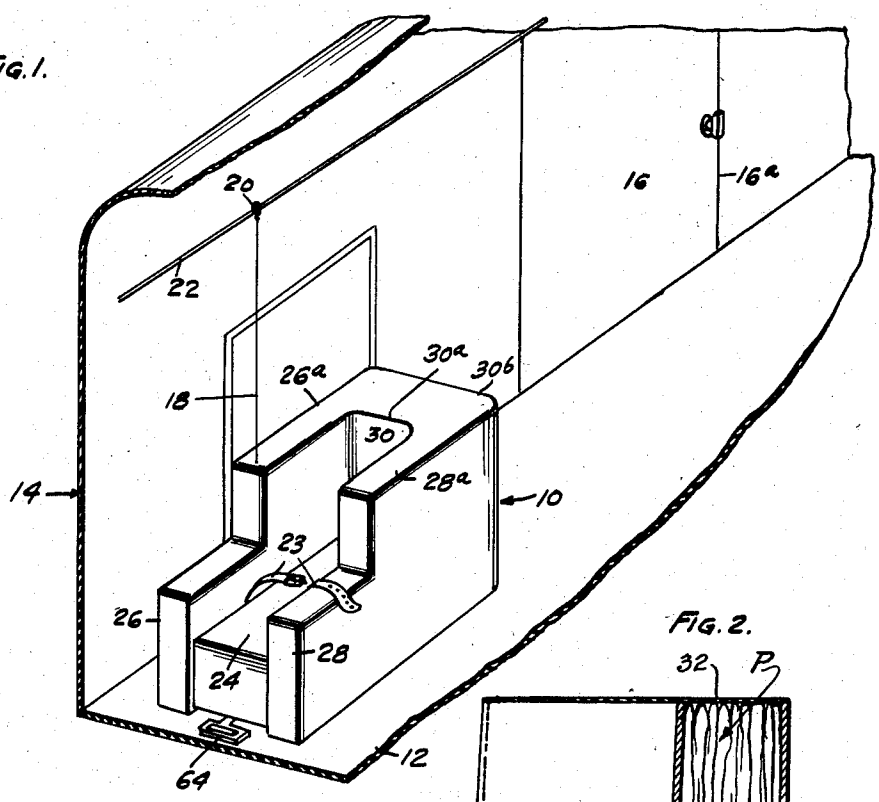


FIG. 2.

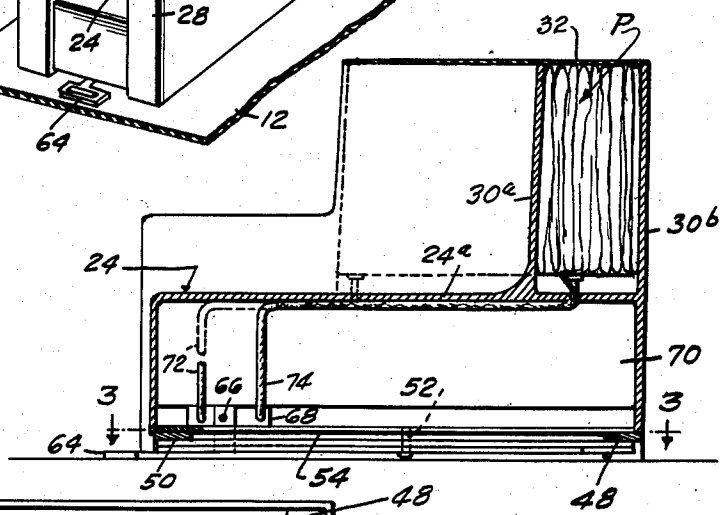
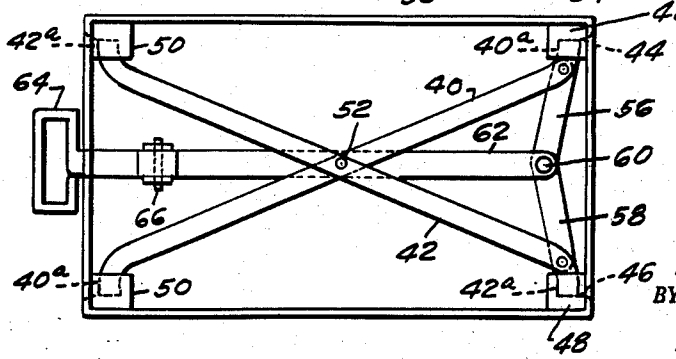


FIG. 3.



INVENTOR.
BOHDAN SRIBNY.
BY
Harry H. Hitzeman
ATTORNEY.

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FIG. 4.

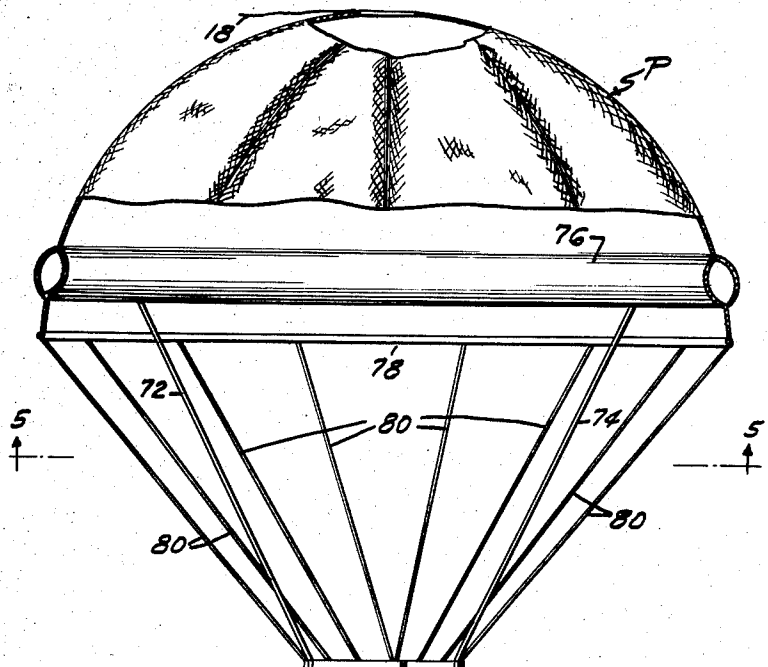
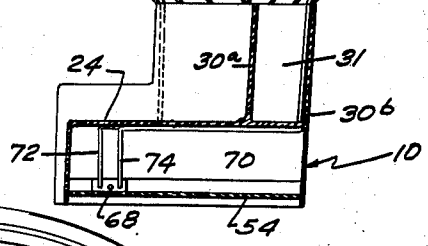
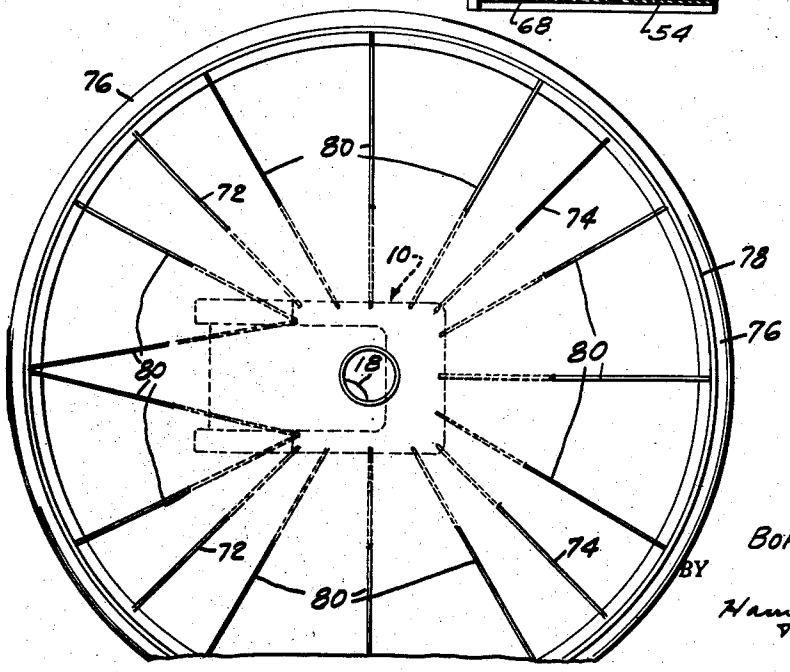


FIG. 5.





INVENTOR.
BOHDAN SRIBNY

BY Harry N. Hitzeman
ATTORNEY.

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RELEASABLE AIRPLANE CHAIR WITH PARACHUTE

Bohdan Sribny, Chicago, Ill.

Application October 23, 1956, Serial No. 617,864

5 Claims. (Cl. 244—141)

My invention relates to safety seats or chairs for airplanes.

My invention relates more particularly to passenger seats or chairs for airplanes which when necessary can be released from attachment to the floor and dropped from the plane with occupants, each chair being provided with its individual parachute that will be automatically opened, thereby effecting a safe descent of the chair and occupant.

While passenger planes today carry no individual parachutes for each passenger, there is no doubt that many lives could be saved in passenger airplane accidents if some type of parachute protection for individuals were provided. Obviously equipping and strapping a parachute upon each boarding passenger would be impractical and unworkable. In addition, this very act would create distrust and suspicion as to safety in the minds of prospective passengers and drastically reduce the number of passengers available. Since this is not practical, I have provided a construction of seat for airplanes, the seat being so constructed that a parachute and means for opening the same are assembled therein and normally concealed from view, yet so arranged that in case of disaster the seat and occupant can be pushed out of the door of the plane and the seat will float to safety.

One of the features of my invention consists in the provision in the back and arm rest portions of the chair, of a compartment for the reception of a collapsed parachute, and the further provision of a compressed air container associated therewith for inflating the same upon release of the chair.

A further feature of the invention is the provision of locking means for normally holding the chair in place, the locking means capable of manual operation to release the chair and at the same time operate valve mechanism to release compressed air to the parachute.

A further feature of the invention is the provision of a ripcord attached to the parachute and slidably connected to a rail in the top of the plane leading to the door, the ripcord adapted to tear off a covering on the seat and arm rests over the parachute compartment of the chair.

Other features of the invention will be more apparent from the following description wherein reference is had to the accompanying drawings, upon which:

Fig. 1 is a front perspective view showing my improved airplane chair in position in an airplane, a fragment of the airplane also being shown;

Fig. 2 is a side elevational view of my improved chair;

Fig. 3 is a plan sectional view thereof taken on the line 3—3 of Fig. 2;

Fig. 4 is a side elevational view similar to Fig. 2 showing the chair during a descent with the parachute open and holding the chair; and

Fig. 5 is a plan sectional view taken generally on the line 5—5 of Fig. 4.

In the embodiment of the invention which I have chosen to illustrate and describe the same, I have shown the

chair **10** positioned generally on the floor **12** of an airplane cabin, the cabin having the side wall **14** and door **16**. A ripcord **18** extends from the top of the chair **10**, the ripcord having a loop **20** encircling a fixed rod **22** which runs the length of the cabin of the plane and is positioned above the door **16**. The chair **10** is also provided with the usual fastening straps **22** for strapping a passenger securely into the seat.

The chair **10** may be of the usual type provided with a seat **24**, the side arm rests **26** and **28**, and a back rest **30**. The side arm rests **26** and **28** may be double-walled, each having an inner wall **26***a* and an outer wall **28***a*, and the back **30** of the chair may also be double-walled, having the inner wall **30***a* and the outer wall **30***b*, so that together with a bottom wall **24***a*, a U-shaped compartment **31** is formed in the back of the chair to receive a collapsed parachute P. The top of this compartment is normally covered by a cloth cover member **32** to which the ripcord **18** is also attached, so that as the chair **10** is dropped through the doorway opening **16***a*, the top will first be ripped off the compartment **31**, and then the parachute P will be pulled out of the compartment to be expanded as the chair descends.

The chair **10** may normally be locked to the floor **12** of the airplane cabin by a pair of locking bars **40** and **42**, each having end portions **40***a* and **42***a* that engage in notches **44** and **46** in block members **48** and **50** that are securely fastened to the floor.

The locking bars **40** and **42** are carried on a pivot **52** extending downwardly from the floor **54** of the chair **10**, the ends of the bars **40** and **42** both having link members **56** and **58** pivotally connected to a pin **60** in the end of a pull rod **62** formed with a handle **64** extending forward from the front end of the chair **10**. The rod **62** also carries a pin member **66** which actuates a valve **68** below the compressed air tank **70** to release the air therein and permit the same to flow through the air hoses **72** and **74**.

Two of the air hoses **72** extend upwardly from the valve **68** and through the forward side of the chair arms **26** and **28**, and the air hoses **74** are adapted to extend upwardly adjacent the back end of the compartment **31**. The air hoses **72** and **74** may extend to a circular tubular ring **76** which is fastened in the parachute P adjacent the lower edge of the same, the lower edge **78** of the chute being also connected by rope members **80** to the chair **10** to hold the same during descent.

The compressed air container **70** is adapted to be placed in the forward end of the chair below the seat portion **24** and in connection with the space under the compartment **31**, provides generally a buoyant base portion for the chair so that in the event the chair is dropped from a plane over a body of water, it will float in an upright position.

From the above and foregoing description, it can be seen that I have provided a safety appliance in the nature of an airplane chair which is adapted to be released, and as it is dropped from the plane an individual parachute is opened and assisted in opening by the introduction of compressed air throughout a circular ring **76** about the bottom of the same so that the parachute will open much more promptly, and will quickly start slowing the descent of the chair and passenger.

It can also be seen that by the use of the container of compressed air, there is no uncertainty as to the opening of the parachute, since it will be forced open through the expanding of the ring member **76** by the introduction of compressed air therein.

It should be borne in mind that when the release handle **64** is pulled so that the chair has been disconnected from the floor and can be slid to the door **16** to be

pushed out, the time elapsed is only a matter of seconds, and while the air valve **68** is opened to permit air to flow from the compressed air tank through the hoses **72** and **74** to the parachute during this period of time, the amount of air is not sufficient so that the parachute will be forced through the cloth cover member **32** above the compartments in the back of the chair and in the arm portions thereof. The flow of air will be sufficient, however, so that when the cloth cover is ripped off the chair, as when the chair is expelled from the door, that the parachute will be ready to and will rapidly be ejected from the chair and then steadily continue to open due to the fact that there are no further obstructions in the hoses and the air will naturally flow faster when the parachute is expanded as shown in Fig. 4 than while it is still in a collapsed condition.

It is further apparent, due to the provision of a buoyant container in the bottom of the chair and the combination with a parachute, that even though the chair lands upon water, the same will float in an upright position for an indeterminate length of time.

I contemplate that changes and modifications may be made in the exact details shown and I do not wish to be limited in any particular; rather what I desire to secure and protect by Letters Patent of the United States is:

1. The combination with an airplane having a cabin, a floor in said cabin, of an airplane chair releasably fastened to the floor of said cabin, said chair comprising a seat having a back and arm portions, said back and arm portions having inner and outer walls and a bottom wall to form a compartment therein, a collapsed parachute positioned in said compartment, a flexible cover for said compartment, a ripcord extending from said parachute through said cover, means normally holding said chair connected to the floor and manually operated means for releasing said chair when desired.

2. The combination with an airplane having a cabin and a floor in said cabin, of an airplane chair releasably fastened to the floor of said cabin, said chair comprising a seat having a back and arm portions, said back and arm portions having inner and outer walls and a bottom wall to form a compartment therein, a collapsed parachute positioned in said compartment, a flexible cover for said compartment, a ripcord extending from said parachute through said cover, means normally holding said chair connected to the floor and manually operated means for releasing said chair when desired, said means including pivoted locking bars in the base of said chair and fixed block members attached to the floor of said airplane, said locking bars having a handle extending forward from the front end of said chair.

3. The combination with an airplane having a cabin and a floor in said cabin, of an airplane chair releasably fastened to the floor of said cabin, said chair comprising a seat having a back and arm portions, said back and arm portions having inner and outer walls and a bottom wall to form a compartment therein, a collapsed parachute positioned in said compartment, said parachute having an inflatable tube about its lower periphery, a flexible cover for said compartment, a ripcord extending from said parachute through said cover, a tank of compressed air in the seat of said chair, tubes extending from said tank to said inflatable tube, means normally holding said chair connected to the floor and manually operated means for releasing said chair and compressed air to said inflatable tube when desired.

4. The combination with an airplane having a cabin and a floor in said cabin, of an airplane chair releasably fastened to the floor of said cabin, said chair comprising a seat having a back and arm portions, said back and arm portions having inner and outer walls and a bottom wall to form a compartment therein, a collapsed parachute positioned in said compartment, said parachute having an inflatable tube about its lower periphery, a flexible cover for said compartment, a ripcord extending from said parachute through said cover, a tank of compressed air in the seat of said chair, tubes extending from said tank to said inflatable tube, means normally holding said chair connected to the floor and manually operated means for releasing said chair and compressed air to said inflatable tube when desired, said means including a valve on said tank, a pair of pivoted lock bars in the base of said chair, fixed block members attached to the floor of said airplane, said pair of pivoted lock bars operatively connected to said valve and having a handle extending forward from the front end of said chair.

5. The combination with an airplane having a cabin and a floor in said cabin, of an airplane chair releasably fastened to the floor of said cabin, said chair comprising a seat having a back and arm portions, said back and arm portions having inner and outer walls and a bottom wall to form a compartment therein, a collapsed parachute positioned in said compartment, said parachute having an inflatable tube about its lower periphery, a flexible cover for said compartment, a ripcord extending from said parachute through said cover, a tank of compressed air in said chair, tubes extending from said tank to said inflatable tube, means normally holding said chair connected to the floor and manually operated means for releasing said chair and compressed air to said inflatable tube when desired, said means including a valve on said tank, a pair of pivoted lock bars in the base of said chair, fixed block members attached to the floor of said airplane, said pair of pivoted lock bars operatively connected to said valve and having a handle extending forward from the front end of said chair, said parachute having flexible cord members connected to the top of said chair.

References Cited in the file of this patent

UNITED STATES PATENTS

1,189,112	Howorth	June 27, 1916
1,826,245	Hammerle	Oct. 6, 1931
1,861,784	Brown et al.	June 7, 1932
2,390,230	Trusty	Dec. 4, 1945
2,463,991	Miller	Mar. 8, 1949