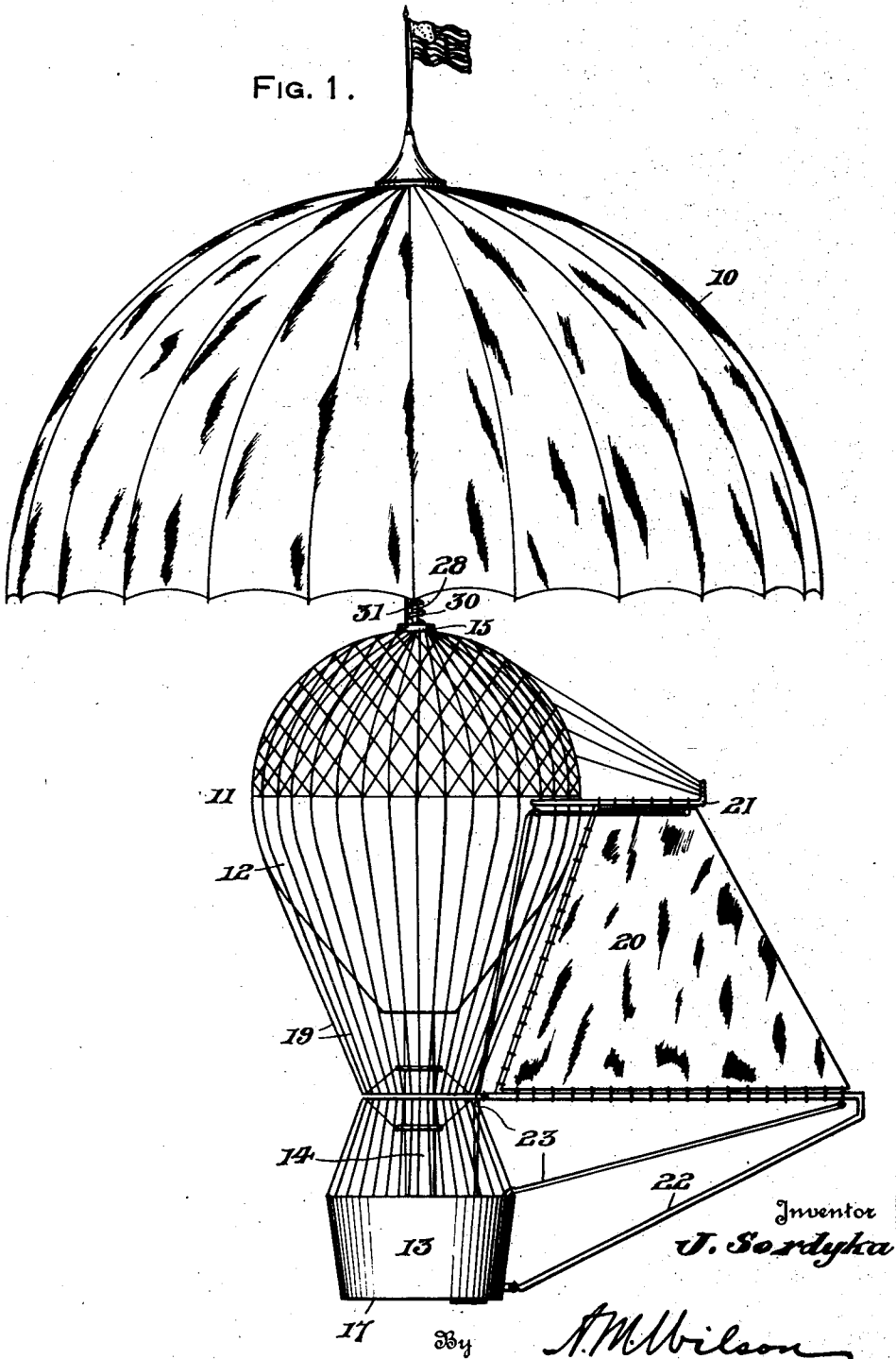


J. SORDYKA.
BALLOON CONSTRUCTION.
APPLICATION FILED DEC. 5, 1917.

1,274,207.

Patented July 30, 1918.
2 SHEETS—SHEET 1.

FIG. 1.



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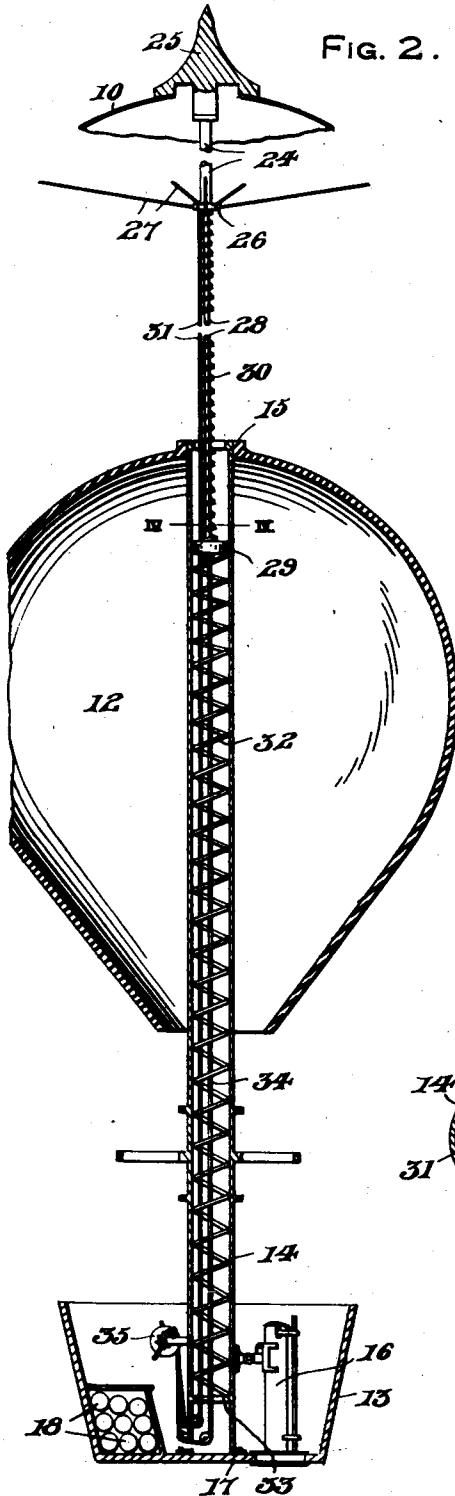
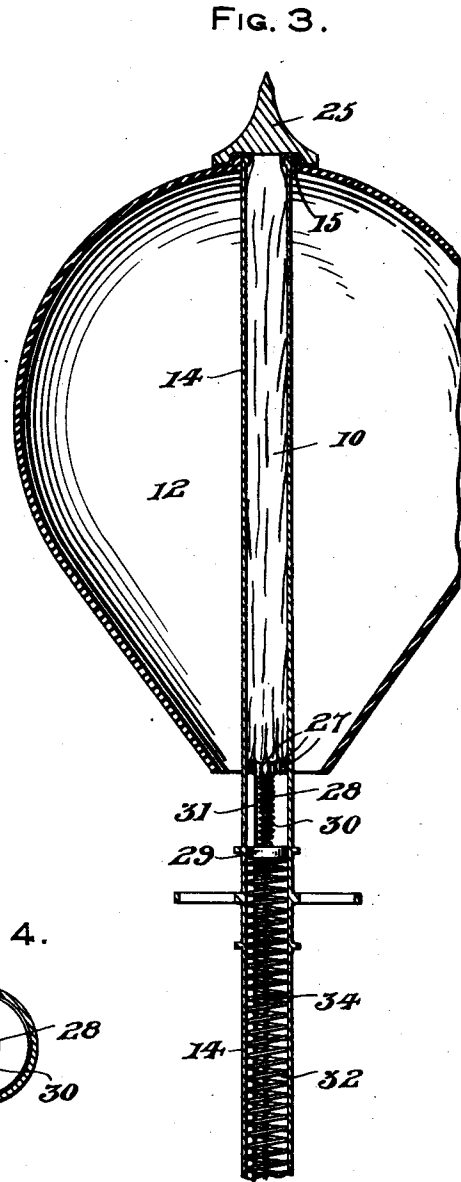
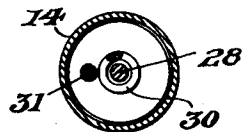


FIG. 4.



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BALLOON CONSTRUCTION.

1,274,207.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOZEF SORDYKA, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Balloon Construction, of which the following is a specification.

The primary object of the invention is the provision of a balloon adapted for carrying passengers such as soldiers detailed for dropping bombs upon the enemy, arrangement being made for preserving the lives of the occupants in the event of damage to the elevating member.

A further object of the invention is the provision of a compact arrangement of parachute carried by a balloon adapted for instant use when the balloon is damaged but occupying only a small space when the parachute is not in use.

A still further object of the device is to provide a balloon especially adapted for war purposes in dropping bombs and other explosives, the device being arranged with a steering means and with a parachute adapted for opening automatically in the event of an accident to the balloon.

In the drawings forming a part of this application and in which like designating characters refer to corresponding parts throughout the several views,

Figure 1 is a side elevation of the device with the parachute in its open arrangement.

Fig. 2 is a vertical central sectional view thereof with parts broken away.

Fig. 3 is a view similar to Fig. 2 with the parachute in its inclosed folded arrangement, and portions of the device omitted and

Fig. 4 is an enlarged transverse sectional view taken upon line IV—IV of Fig. 2.

Referring more in detail to the drawings, it will be noted that my invention broadly consists in a parachute 10 of umbrella form carried by a balloon 11 of substantially the usual appearance in such a manner as to be completely inclosed when not in use but automatically projected and opened for use when the occasion requires.

The balloon 11 has an inverted pear-shaped gas bag 12 adapted for inflation for causing the device to rise in the air, a basket 13 being suspended therefrom by means of a tubular post 14 extending through the bag 12 and secured to the top thereof as at 15.

A telescope or sighting apparatus 16 is mounted in the basket 13 for looking downwardly through the bottom 17 of the basket for assisting the soldiers operating the balloon to correctly aim the bombs 18 upon the enemy when dropping the same out of the basket.

It will be understood that the basket 13 is also connected with the bag 12 by the usual arrangement of suspending cables 19, and a sail 20 is carried at one side of the balloon for assisting the occupants in steering the device in its movements through the air. Upper and lower supporting frames 21 and 22 carry the sail 20, and cords 23 are provided for lifting the sail when found desirable.

The parachute 10 being in the form of an umbrella, has a central pole or stick 24 having a cap 25 upon the upper end thereof, and a ring 26 is slidably arranged upon the pole 24 connected to the ribs of the parachute 10 by means of bows 27, whereby, as will be apparent, the parachute may be opened or closed, by elevating or lowering the ring 26. A reduced lower extension 28 is provided for the pole 24 mounted upon a disk or block 29 arranged within the post 14 in the manner of a piston. A spring 30 encircles the extension 28 and bars between the ring 26 and block 29, and a cord 31 is attached to the ring 26 and passes through the post 14 to a suitable winding mechanism arranged within the basket 13. By operating the winding mechanism the cord 31 pulls down on the ring 26, compressing the spring 30 and closing the parachute. It will be understood that when so compressed, a releasing of the ring 26 permits the spring 30 to automatically open the parachute 10 unless the same is otherwise restrained.

A helical spring 32 is arranged within the post 14 being mounted at its lower end upon an inner shoulder 33 of the post, and bearing at its upper end against the block 29. A cord 34 is arranged within the post 14 having its upper end attached to the block 29 and its other end connected to a winding mechanism 35 within the basket 13. It will be seen that when the parachute 10 has been compactly folded by pulling downwardly upon the cord 31, the parachute may be drawn inwardly of the post 14 by drawing downwardly upon the cord 34, thereby compressing the spring 32 and arranging the parachute in its normal inoper-

ative position within the balloon bag 12 as illustrated in Fig. 3 of the drawings.

During the use of the balloon, the parachute 10 is normally inclosed within the post 14, and the bag 12 being filled with a suitable gas, the balloon will rise to the desired altitude for viewing the enemy through the telescope 16 and dropping the bombs 18, while the rudder or sail 20 slightly assists in steering the aircraft. In the event of an injury to the bag 12, such for instance, as that occasioned by a shot from the enemy, the cord 34 may be released for automatically elevating the block 29 and projecting the folded parachute 10 outwardly of the upper end of the post 14, and the cord 31 being then released, the spring 30 automatically opens the parachute 10 in the form of an umbrella permitting the entire device to gradually fall to the ground without injuring the remainder of the balloon or the contents of the basket 13. It will be seen that the primary object is to automatically project the parachute 10 to its operative open position when required in the event of an accident and which operation has been fully described while it will only be necessary to close the parachute and restore the same within the post 14 when the balloon is on the ground and at which time the attendants may readily fold the fabric portion of the parachute for admitting the same into the post 14 upon pulling inwardly upon the cord 34.

A serviceable device is provided for use in time of war by means of which observations may be taken at high altitudes as well as the dropping of missiles upon the enemy, while the safe descent of the operators will be insured by the mechanism provided and which takes up but little room during the aerial operation of the balloon.

What I claim as new is:—

1. An aircraft comprising a gas bag, a hollow post extending therethrough, a basket carried by the said post beneath the bag, a folding parachute normally positioned within the post and projecting and opening means for the parachute adapted for control within the basket.

2. An aircraft and elevating means, a hollow post secured to the elevating means,

a cargo carrier attached to the post, a foldable parachute adapted for normal arrangement within the post, means adapted for projecting the parachute outwardly of the post, opening means for the parachute and controlling members for the said projecting and opening means operable from a point within the cargo carrier.

3. A device of the class described comprising an elevating bag for a balloon, a tubular post positioned therethrough attached to the top of the bag, a basket upon the lower end of the post beneath the bag, a block slidably arranged within the post, a mounting spring within the post beneath the block, lowering means for the block and tensioning means for the spring arranged within the basket and a folding parachute mounted upon the pocket and normally positioned within the post adapted for automatic opening when the block is elevated within the post.

4. A device of the class described comprising an elevating bag for a balloon, a tubular post positioned therethrough attached to the top of the bag, a basket upon the lower end of the post beneath the bag, a block slidably arranged within the post, a mounting spring within the post beneath the block, lowering means for the block and tensioning means for the spring arranged within the basket, a parachute including a pole mounted upon the block axially of the post, a ring upon the pole adapted for opening and closing the parachute, an opening spring for the parachute tensioned between the said block and ring and a pull cord attached to the ring and extending to a point within the basket.

5. In combination with the gas bag of a balloon, a hollow post extending therethrough and attached to the top of the bag, a block slidably arranged within the post, automatic projecting means for the block, a parachute mounted upon the block adapted for arrangement in its folded position within the post, automatic opening means for the parachute and controlling means for the opening means and the projecting means operable at a point beneath the block.

In testimony whereof I affix my signature.
JOZEF SORDYKA.