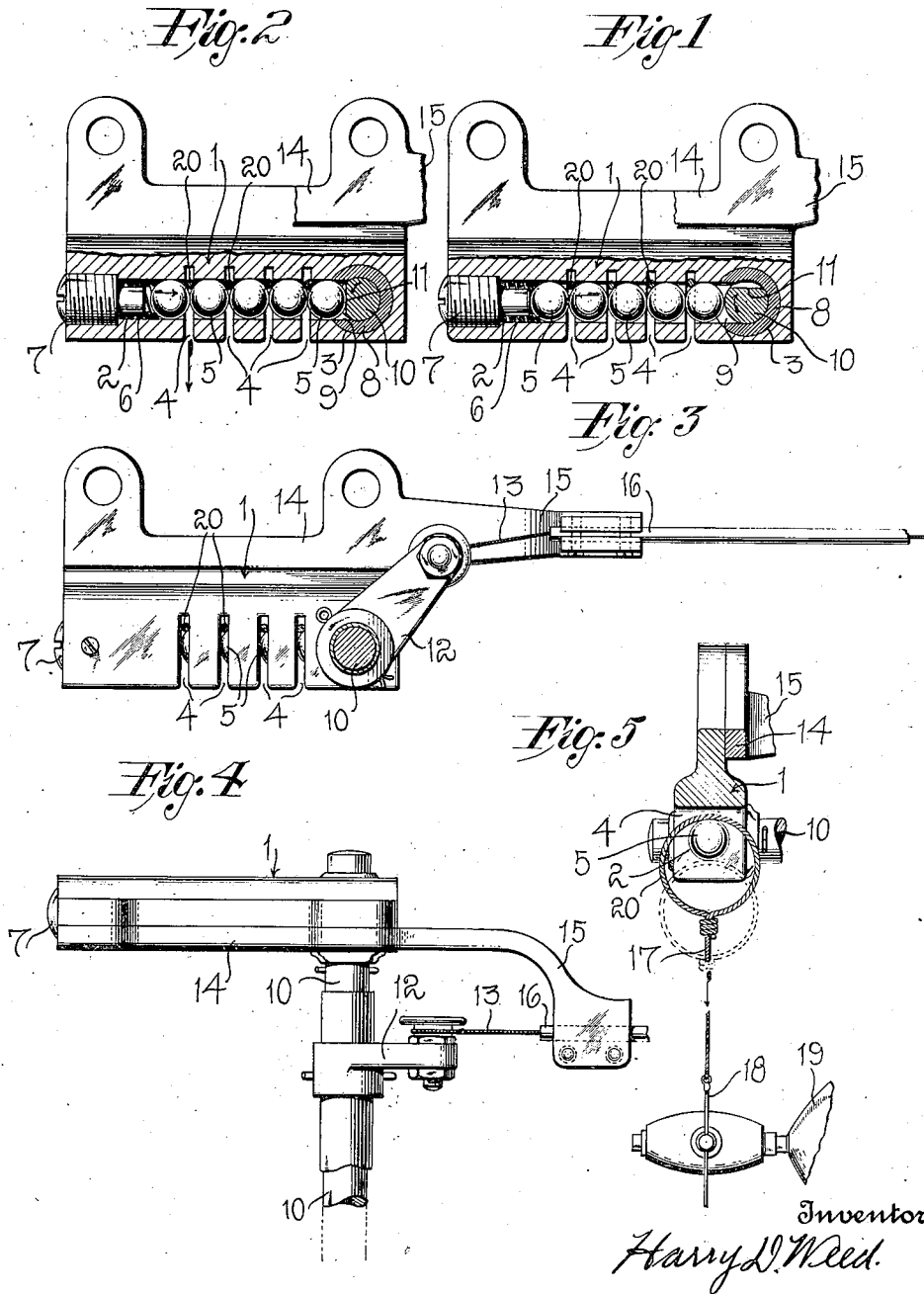


H. D. WEED.
SAFETY RELEASE WIRE HOLDER FOR AERIAL BOMBS.
APPLICATION FILED JUNE 7, 1919.

1,385,598.

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UNITED STATES PATENT OFFICE.

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SAFETY-RELEASE-WIRE HOLDER FOR AERIAL BOMBS.

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Specification of Letters Patent. Patented July 26, 1921.

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To all whom it may concern:

Be it known that I, HARRY D. WEED, a citizen of the United States, stationed at McCook Field, Dayton, Ohio, have invented an Improvement in Safety-Release-Wire Holders for Aerial Bombs, of which the following is a specification.

The invention described herein may be used by the Government, or any of its officers or employees in prosecution of work for the Government, or by any other person in the United States, without payment of any royalty thereon.

This invention relates to a holder for the safety release wires of airplane bombs. By safety release wire is meant the wire that is connected to the safety release pin in an airplane bomb, that pin which when in position on the bomb renders the bomb safe against explosion and which when removed causes the bomb to be armed, that is to say, renders it explosive under suitable conditions such as percussion.

The object of this invention is to provide a safety release wire holder that will automatically pull the safety release wire and safety release pin when the bomb is intentionally dropped but which will let go of the safety release wire entirely and so not pull out the safety release pin when the bomb is accidentally or unintentionally dropped.

In the drawings illustrating one embodiment of my invention, Figure 1 is a sectional view of the safety release wire holder with the parts in position so as to lock the safety release wires.

Fig. 2 is a similar view, but with the parts in position so that the safety release wires are yieldingly held.

Fig. 3 is a side view of the device.

Fig. 4 is a top view of the same.

Fig. 5 is a sectional end view.

The safety release wire holder of this invention comprises a body portion 1 provided with a longitudinally extending passage 2 and a transversely extending passage 3. The passage 2 is in communication with the passage 3, as shown. At the other end the passage 2 is internally threaded.

A series of vertical, transversely extending slots 4 is cut in the body element 1, these slots intersecting the longitudinally extending passage 2. These slots may be a little wider than the diameter of the safety release wires that are used.

A series of wire engaging elements 5, here shown as ordinary balls or spheres, is held in the passage 2 by spring 6, which, at one end presses against one of the balls 5 and which at its other end bears against the abutment 7 threaded into the passage 2. It should be noted that abutment 7 is adjustable.

The passage 3 has mounted therein a tube 8 cut away at 9 to open into the passage 2. Rotatably mounted in the tube 8 is the rod 10 provided with a flattened portion 11. The rod 10 may be rotatable through a small arc by the lever 12 and operating cord 13.

The body portion 1 may be suitably attached to a plate 14 provided with an arm 15 that serves to carry the guide 16 for the cord 13.

The several safety release wires 17 that are attached to their respective safety release pins 18 carried by the bomb 19 are each provided with a loop 20 at its upper end, which loop engages above the several balls 5 in the several notches 4.

The operation of the parts will now be described. Referring to Fig. 1, the holder is set for locking the safety release wires so that they can not be pulled out of the holder when the bomb falls. This result is attained by turning the rod 10 to the position shown in Fig. 1, which presses the several balls 5 to the left until the one on the extreme left comes into contact with the abutment 7, whereby the balls are pressed and rigidly held immovable in the passage 2. The wire loops 20 accordingly can not get past the balls and will accordingly pull the safety release pins 18 to arm the bombs. In short, Fig. 1, shows the parts in the position for intentional dropping of the several bombs.

Referring now to Fig. 2, it will be noted that the rod 10 is turned to such a position that the flattened portion 11 is toward the passage 2, whereby the balls 5 are pressed away from the abutment 7. The balls 5 are now yieldingly held in relation to one another and may be readily separated a short distance by moving one of them against the pressure of the spring 6. This is the position of the safety release wire holder when it is not intended that any bombs be dropped. If however accidentally or unintentionally a bomb is dropped the pull of the bomb on the wire 17 and loop 20 as it falls will pull any given loop 20 downwardly past its respective retaining balls 5 and so will not

pull the safety release pin 18 and so the bomb will remain safe. The two mentioned balls 5 spring apart against the pressure of the spring 6 to allow the release of the
5 wire 20.

The controlling rod 10 is here shown as controlling only four bombs. It should however be understood that this controlling rod 10 may control any number of safety release
10 wire holders and so may control any number of bombs.

While I have illustrated a particular embodiment of my invention it should be understood that it may be carried out in
15 other ways and defined in the following claims.

I claim:

1. In a safety release wire holder for bombs, a body portion provided with a passage-way and wire receiving slots communicating with said passage-way, wire holding elements in said passage-way, and means for holding said elements in yielding contact. 20

2. In a safety release wire holder, a body portion provided with a passage-way and 25 wire receiving slots communicating with the passage-way, wire holding elements in the passage-way, means for holding said elements in yielding contact and means for holding said elements against yielding.

HARRY D. WEED.