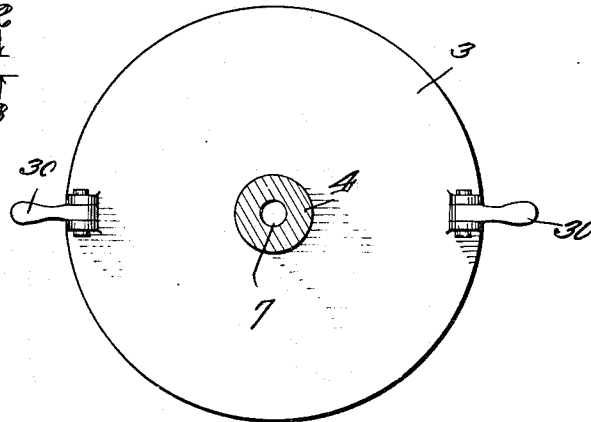
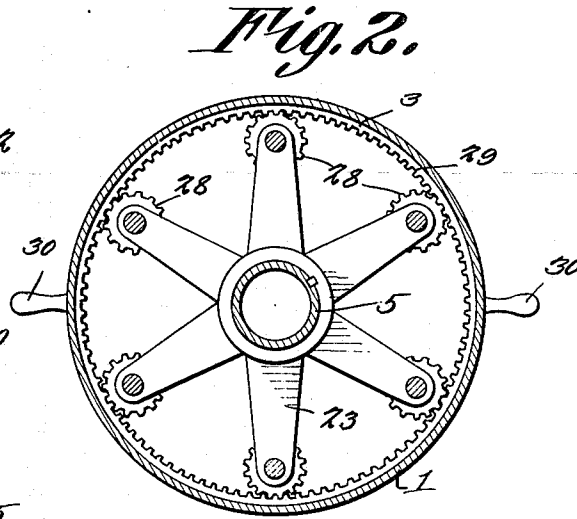
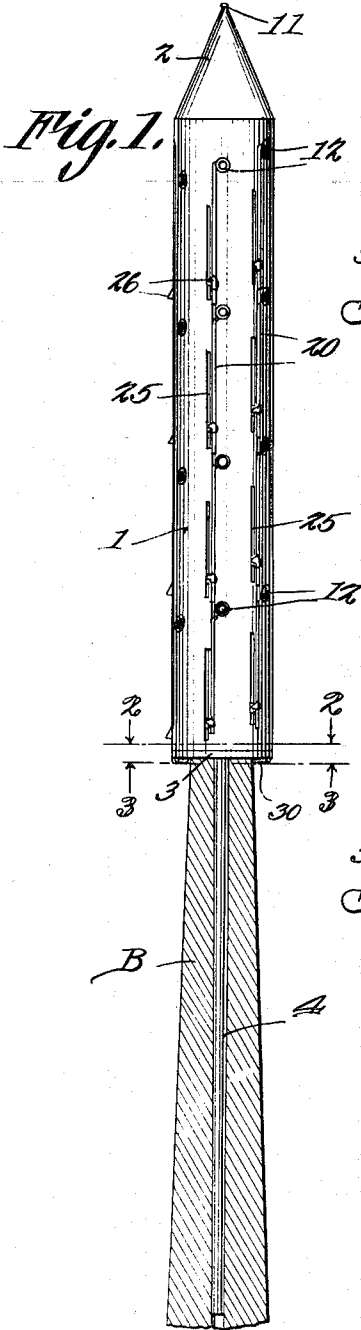


J. M. SALADINER.
AIRSHIP DESTROYER.
APPLICATION FILED OCT. 4, 1917.

Patented Nov. 5, 1918.
3 SHEETS—SHEET 1.

1,284,149.



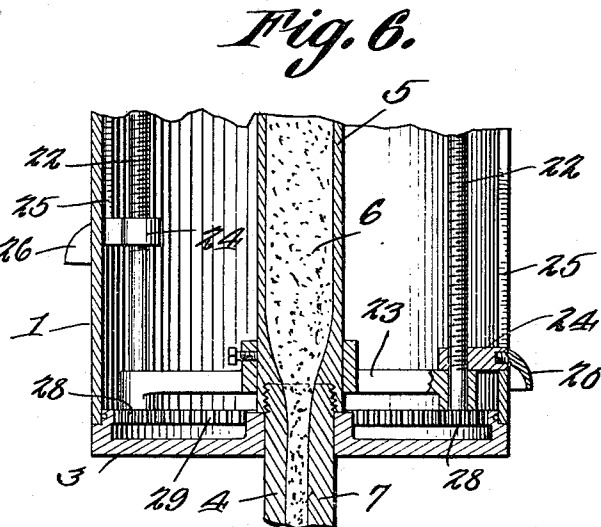
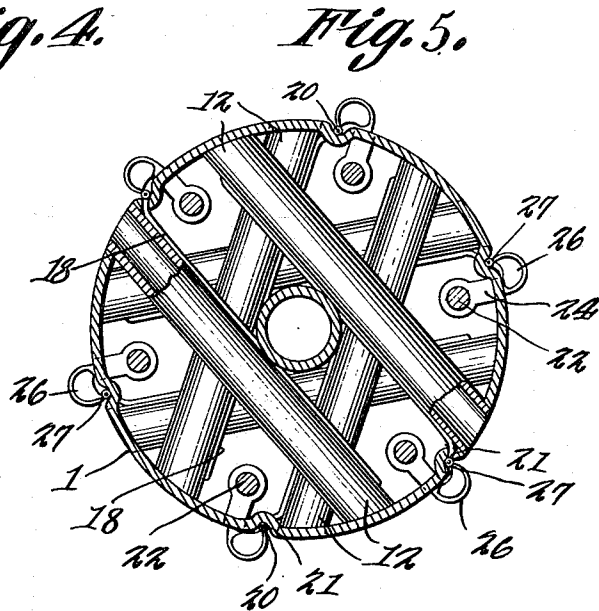
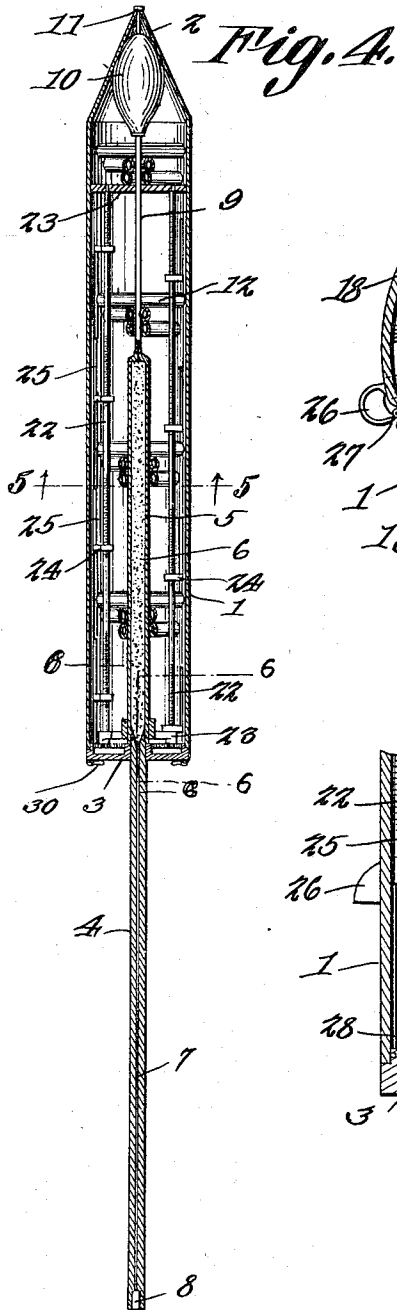
Witness

J. P. [Signature]

Inventor
J. M. Saladiner

By *CA Snow & Co.*
Attorneys.

1,284,149.



Witness

J. R. [Signature]

Inventor
J. M. Saladin

By *C. A. Snow & Co.*
Attorneys.

1,284,149.

J. M. SALADINER.
AIRSHIP DESTROYER.
APPLICATION FILED OCT. 4, 1917.

Patented Nov. 5, 1918.
3 SHEETS—SHEET 3.

Fig. 7.

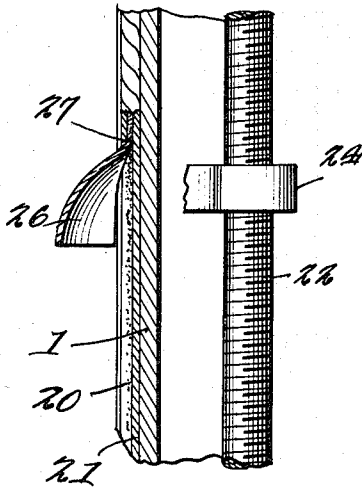
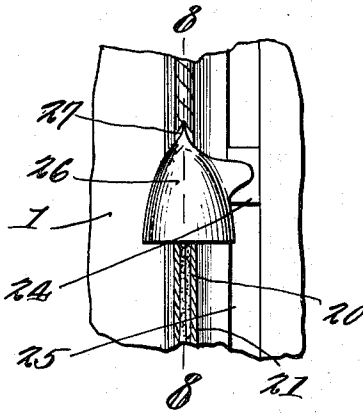
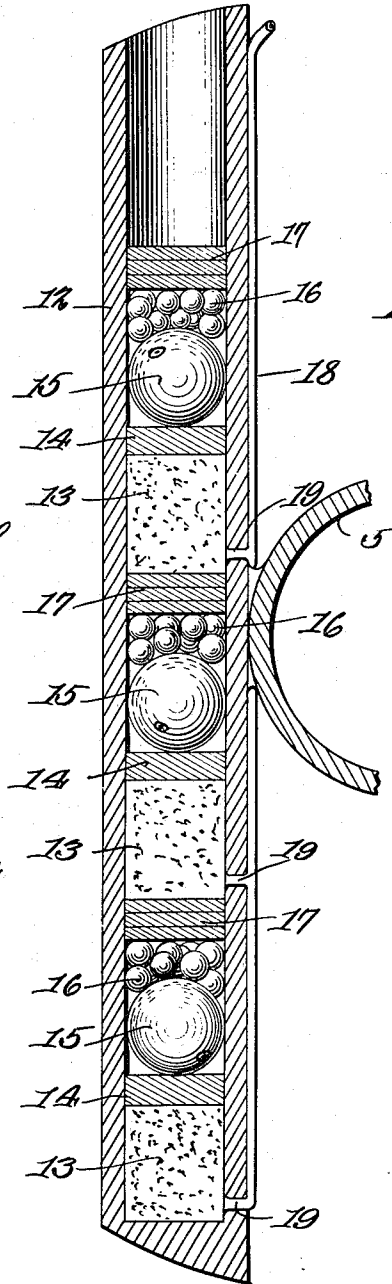


Fig. 8.

Witness
J. R. Tomlin

Fig. 9.



Inventor
J. M. Saladin
by *C. A. Snow*

UNITED STATES PATENT OFFICE.

JOSEPH M. SALADINER, OF BRYAN, TEXAS.

AIRSHIP-DESTROYER.

1,284,149.

Specification of Letters Patent.

Patented Nov. 5, 1918.

Application filed October 4, 1917. Serial No. 194,726.

To all whom it may concern:

Be it known that I, JOSEPH M. SALADINER, a citizen of the United States, residing at Bryan, in the county of Brazos and State of Texas, have invented a new and useful Airship-Destroyer, of which the following is a specification.

The present invention relates to an airship destroyer, and aims to provide a novel and improved contrivance for destroying aeroplanes, Zeppelins and other hostile aircraft.

One of the objects of the invention is the provision of a projectile having means for firing pellets and bombs radially in various directions at different altitudes, and to assure of the destruction of the airship if it is within the limits of range of the projectile.

Another object of the invention is the provision of novel means for igniting the fuses, when the projectile is shot from a gun, and for priming the device to start firing at a predetermined altitude.

A further object of the invention is the provision of a bomb to be exploded on contact with the airship, or at the extreme limit of movement of the projectile.

A still further object of the invention is to provide the projectile with a rocket for propelling it to greater altitudes after the force of its momentum is nearly spent in acting against gravity.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawings, wherein:

Figure 1 is an elevation of the device.

Figs. 2 and 3 are enlarged cross sections on the respective lines 2—2 and 3—3 of Fig. 1.

Fig. 4 is a longitudinal section, portions being shown in elevation.

Figs. 5 and 6 are enlarged sections on the respective lines 5—5 and 6—6 of Fig. 4.

Fig. 7 is a detail view showing one of the fuse cutters and spoon-shaped deflector.

Fig. 8 is a section on the line 8—8 of Fig. 7.

Fig. 9 is a detail view illustrating the charges within one of the barrels.

The structure includes a cylindrical casing 1 of suitable dimensions, and provided with a conical or tapered nose 2, and a rotatable base 3 fitted partially therein. A stem or tail 4 extends from the base or lower end of the casing axially thereof, and disposed axially within the casing is a tubular chamber 5, forming part of the propelling rocket, said chamber containing a suitable propelling powder 6. The rear or lower end of the chamber 5 is united with the stem 4, and said stem has a bore 7 leading longitudinally therethrough from the chamber 5 to the rear end of the stem, which is provided with a time fuse 8. The bore 7 contains powder, which in being ignited by the fuse 8, in turn ignites the powder 6, and the same blowing out through the bore 7 will, by reaction, serve to propel the device as a rocket. The stem 4 is adapted to fit in the bore of the barrel B of an anti-aircraft gun, with the base 3 seating on the muzzle of the barrel, whereby the gun in being fired will project the device upwardly in the direction aimed, the stem or tail 4 holding the device coincident with its line of flight. The time fuse 8 is ignited by the firing of the gun, and said time fuse will in turn ignite the powder within the bore 7, after the projectile has reached a predetermined altitude, at which its force of momentum is nearly spent, and at which time the powder 6 in being ignited will raise the device to a greater altitude, propelling it in the manner of a skyrocket.

A bomb 10 is located within the nose of the casing and is connected by a tube 9 with the forward or upper end of the chamber 5, said tube 9 containing a powder train, which will be ignited after the powder 6 burns up to the upper end of the chamber 5. Thus, as the device reaches its limit of elevation, the bomb 10 will be exploded, to destroy the airship should it be at the limit of the range of the projectile. A percussion cap or primer 11 for the bomb 10 is provided at the point of the nose 2 to explode said bomb by contact with the airship, should this occur.

Disposed within the casing 1 at longitudinally spaced points are a plurality of sets of barrels 12, the barrels of each set being ar-

ranged in superposed pairs in reversed positions, and in different chordal lines within the casing, so that the muzzles of said barrels open in various directions from all sides of the casing. These barrels have their ends secured to the casing and said barrels are secured to one another and to the chamber 5 and tube 9, thus providing a substantial structure. Each barrel has therein a series of charges to be fired in succession. Thus, a series of longitudinally spaced explosive charges 13 are provided in each barrel, and wads 14 are disposed in front of said explosive charges, and in front of each wad 14 there is a bomb 15 and pellets 16 held in place by wads 17, which also serve to separate the successive charges. A time fuse 18 extends along each barrel 12 and has branches 19 extending into the barrel to the respective charges 13, whereby said explosive charges are ignited in succession. The bombs 15 are provided with suitable fuses to explode them when they are shot a predetermined distance from the barrel.

As a means for igniting the fuses 18 after a desired predetermined interval of time elapses after the projectile has been fired and reaches a certain altitude, master fuses 20, one for each fuse 18, are disposed in longitudinal grooves 21 provided in the periphery of the casing 1 and leading rearwardly from the muzzles of the respective barrels 12. The fuses 20 are employed for timing the ignition of the fuses 18 with which the forward ends of the master fuses are connected through the casing or shell 1. Longitudinal screws 22 are disposed within the casing, one for each longitudinal series of fuses 20, said screws being journaled through spiders 23 secured to the chamber 5 and tube 9. Nuts 24, one for each fuse 20, threadedly engage the screws and project outwardly through longitudinal slots 25 in the casing. Attached to the nuts on the exterior of the casing are spoon-shaped deflectors 26 extending rearwardly and merging, at their forward portions, into pointed cutters 27 projecting forwardly and movable in the grooves 21. The deflectors 26 and their cutters 27 are normally at the rear ends of the slots 25 and fuses 20, and when said deflectors and cutters are moved forwardly by the rotation of the screws 22, the cutters 27 will move within the coverings of the fuses 20 which are secured in the grooves 21, and slit open said coverings, exposing the powder therein in rear of said cutters, in order that the flash of powder surrounding the projectile when it is fired from the gun, will be directed by deflectors 26 to the powder of the fuses 20 at the points to which the cutters 27 have been advanced, the deflectors 26 catching and directing the flame toward the fuses 20 and to the cutters 27. Thus, the further the cutters 27 are advanced, the less will be the length

of the fuses 20 from the points where they are slit to their connection with the fuses 18, thus lessening the time required for the ignition of the fuses 18. The ignition of the last mentioned fuses can also be timed by advancing the cutters 27 according to a suitable scale of graduations for the fuses 20.

In order to set all of the deflectors 26 and cutters 27 simultaneously, pinions 28 are attached to the rear ends of the screws 22 and mesh with internal gear teeth 29 with which the rotatable base 3 of the casing is provided. The base 3 has handles 30 normally folded behind the same, which can be swung outwardly for turning said base by hand before the projectile is fired. This enables the base 3 to be conveniently turned for rotating the pinions 28 and screws 22, thus advancing the cutters 27 the desired distance, to rip or slit open the fuses 20.

In operation, after the base 3 has been rotated to advance the cutters 27 the desired amount, according to the altitude at which the fuses 18 are to be ignited, the stem 4 is placed in the barrel B of the anti-aircraft gun, and the projectile is fired from the gun at the hostile aircraft. When the projectile is fired, the flame from the gun passing forwardly around the casing 1, will be deflected by the deflectors 26 to the powder in the fuses 20 at the cutters 27, thus igniting said fuses. Therefore, when the projectile reaches the predetermined altitude, the fuses 20 having burned to their point of connection with the fuses 18, will ignite the latter fuses, and they will in turn ignite the explosive charges 13 of the barrels in succession. The first charges 13 of the barrels are ignited simultaneously at one altitude, firing the pellets 16 and bombs 15 in various directions, the bombs 15 exploding at certain distances from the line of flight of the projectile. The second charges 13 are ignited at a higher altitude, and the third charges 13 at a still higher altitude, thus providing for repeated firing of the pellets and bombs in various directions at various altitudes, to assure of the destruction of the airship. The time fuse 8, which was ignited when the projectile was fired, ignites the powder within the bore 7 after the projectile has reached a certain altitude, thus causing said powder to be forced out violently through the rear end of the bore 7, propelling the projectile by reaction, in the manner of a skyrocket, to elevate it to greater altitudes after its momentum is nearly spent. In this way, the force delivered to the projectile by the gun is accentuated to carry the projectile a greater height. Should the projectile accidentally strike the airship, the percussion cap 11 will ignite the bomb, which will put the airship out of commission, but if this is not the case, then the powder in the tube 9 will be ignited after the powder 6 has burnt

up to said tube, so that the bomb 10 will be ignited after the projectile has reached its limit of upward movement, creating a final explosion at greatest height to reach the aircraft if the pellets 16 and bombs 15 do not.

Having thus described the invention, what is claimed as new is:

1. An anti-aircraft projectile including a casing, reinforcing tubes extending through the casing, said tubes being crossed and opening through the wall of the casing, each tube being closed at one end, a series of separated gun charges within each tube, each charge including an explosive, a projectile, and a wad, a fuse extending along each tube for igniting the charges successively, and simultaneously adjustable means for timing the initial explosions in the respective tubes.

2. A projectile having a time fuse, and a movable flame deflector having means for cutting the fuse open.

3. A projectile having a time fuse, a movable member, means for advancing it, a de-

flector carried by said member, and a cutter carried by the deflector to slit the fuse open, the deflector being designed for deflecting the flame of discharge to said cutter and fuse.

4. A projectile embodying a casing, firing charges carried thereby, longitudinal time fuses carried by the casing for igniting said charges, members movable longitudinally along the casing, deflectors carried by said members on the exterior of the casing, cutters carried by said deflectors for cutting the fuses open, said deflectors serving to deflect the flame of discharge to said fuses and cutters, and means within the casing for adjusting said members.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOSEPH M. SALADINER.

Witnesses:

S. M. HUNTER,
R. Q. ARLIN.