(No Model.) 2 Sheets—Sheet 1.

J. A. HILL.

SEVERING MECHANISM FOR AERIAL TORPEDOES.

No. 603,689. Patented May 10, 1898.

Fig. 1.

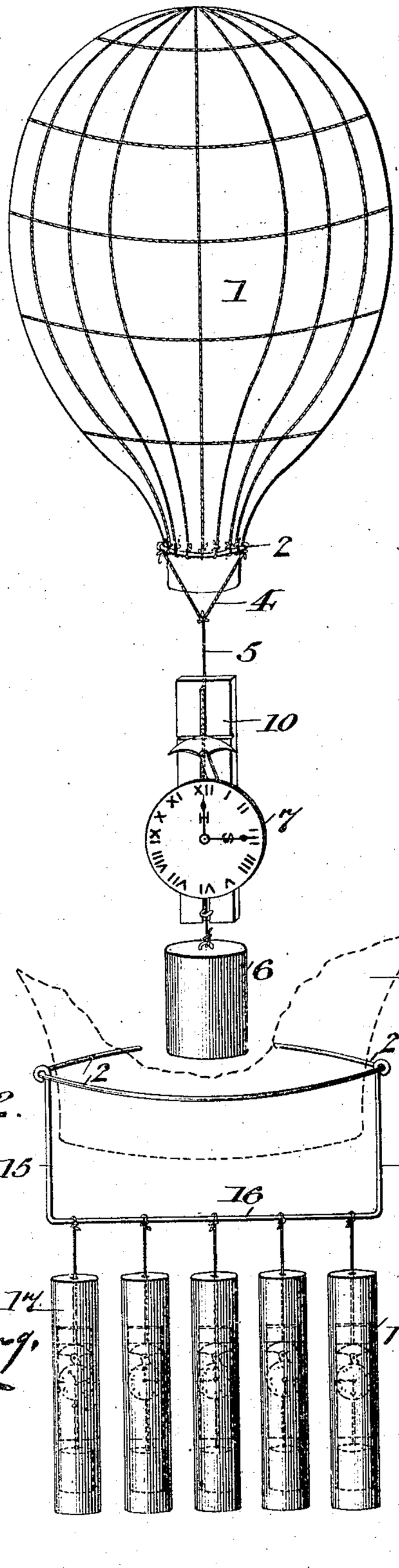

Fig. 2.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

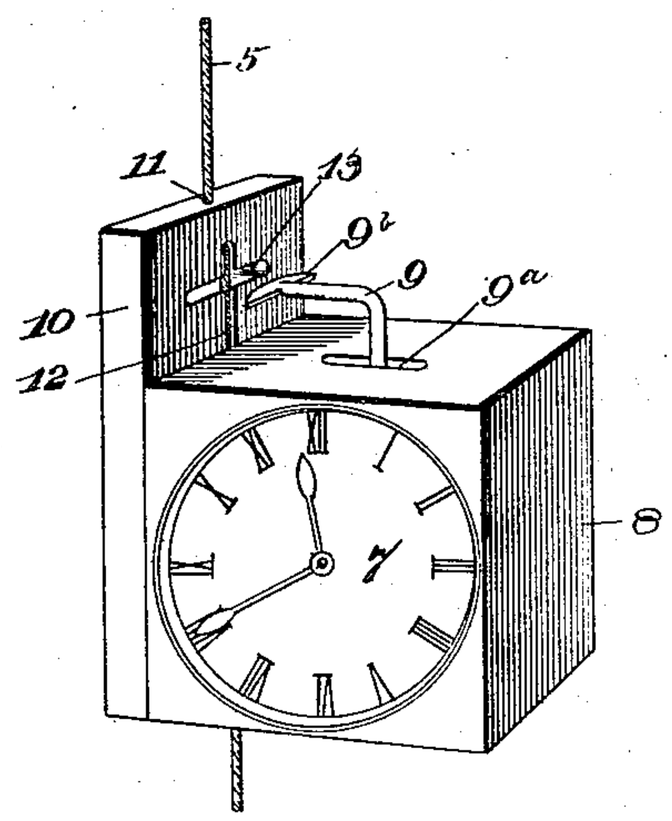


Fig. 4.

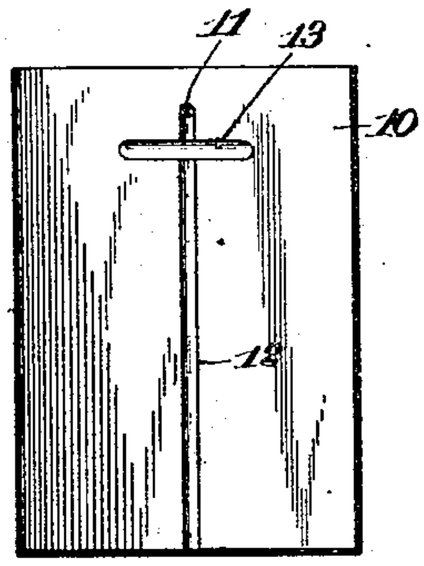


Fig. 6.

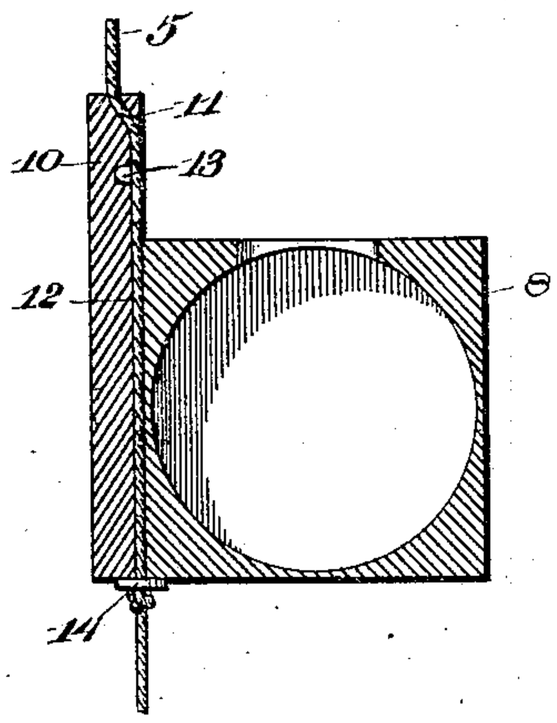
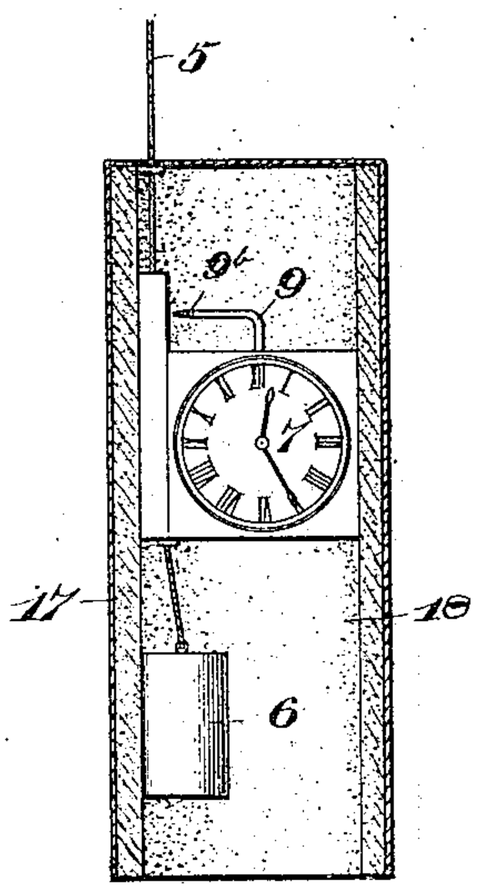


Fig. 5.



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UNITED STATES PATENT OFFICE.

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SEVERING MECHANISM FOR AERIAL TORPEDOES.

SPECIFICATION forming part of Letters Patent No. 603,689, dated May 10, 1898.

Application filed October 7, 1896. Serial No. 608,189. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. HILL, a citizen of the United States, residing at Ravenswood, West Virginia, have invented a new and useful contrivance for destroying forts, fortified places, property generally, and human lives in case of war, of which the following is a specification.

This invention relates to destructive engines of war and comprises a balloon or other suitable means of support and conveyance from which is suspended a high explosive and means for dropping the explosive from the balloon and upon the object to be destroyed.

The object of this invention is to provide a device of this character especially adapted for use by troops in the field or upon vessels of war, and is therefore constructed of light but strong material, thus being easily transported and readily set up or placed in position for immediate use, and to provide means whereby the discharge will take place at the proper time and place.

Further objects and advantages will be hereinafter more fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a general perspective view of my invention suspended from a balloon. Fig. 2 is a detail perspective view illustrating a series of the devices suspended from the same balloon. Fig. 3 is a detail perspective view of the block carrying the knife-blade and clock mechanism. Fig. 4 is a side elevation of the block with the clock mechanism removed. Fig. 5 is a vertical sectional view of the casing containing one of the devices. Fig. 6 is a vertical sectional view taken through the block and with the clock mechanism removed.

Corresponding parts in the several figures are denoted by like numerals of reference.

Referring to the drawings, 1 designates a balloon or other suitable means for supporting and transporting the device through the air at the required distance above the earth. Suspended from the balloon by means of the usual netting 3 is a metal ring 2. Secured at diametrically opposite points upon the ring 2 is a rope or chain 4, and from the middle thereof is suspended a rope 5, carrying the explosive and operating mechanism.

Numeral 6 designates a can or other suitable receptacle for the explosive, which is secured to the lower extremity of the rope 5.

The means for suddenly dropping the explosive comprises a clock mechanism 7, contained within a suitable framework or box 8 and having an arm 9 extending through a slot 9^a in the top of the box and connected with the alarm-train of the clock mechanism. This arm carries a sharp cutting-blade 9^b at its outer extremity. One side 10 of the clock-containing box extends up beyond the top thereof and is provided with a hole 11, extending diagonally from the upper face of the top edge downwardly and opening through the face of the side 10 next the top of the framework inclosing the clock mechanism. A groove 12 extends from the lower opening of the hole 11 down along the face of the side 10 to the bottom thereof. Extending at right angles thereto and intersecting the groove 12 is another groove 13, situated at a suitable distance below the hole 11. The rope 5, extending from the balloon, passes through the hole 11 and out into the groove 12, thus carrying the clock-casing, which is held at a determined point upon the rope by means of a suitable stop 14.

As illustrated in Fig. 2, a number of the devices may be suspended from the same balloon. When this is the case, instead of a rope or chain a metal frame or bail 15 is suspended from the ring 2, and from the lower cross-bar 16 are suspended the several devices. Each of the devices is provided with a cylindrical or other suitably-shaped casing 17, lined or padded, as shown at 18, whereby the devices are prevented from receiving a sudden jar and causing a premature explosion.

The operation of my invention is as follows: When the clock-containing box and explosive-receptacle have been suspended from the rope, as heretofore described, the alarm mechanism is set and the balloon cast loose. As illustrated in the drawings, the knife-blade 9^b is normally held just in front of the groove 13, and when the alarm mechanism is set off the arm 9 is worked quickly back and forth

and the knife-blade 9ᵇ brought into contact with the rope at each forward stroke of the arm. As will be readily understood, the successive rapid blows of the knife-blade will sever the rope 5 and allow the explosive to fall to the ground, and thus destroy that with which it comes in contact.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A destructive engine of war, comprising a balloon member, an explosive-receptacle, a rope connecting same, a block mounted upon said rope carrying an arm provided with a cutting member for severing said rope, and suitable means for operating said arm, substantially as and for the purpose set forth.

2. A device of the class described, comprising a balloon member, an explosive member, a rope connecting same, and means for disconnecting said members, consisting of a block mounted upon said rope and carrying a cutting-blade operated by suitable clock mechanism to sever the rope, whereby the explosive is dropped from the balloon, substantially as shown and described.

3. A device of the class described, comprising a balloon member, a rope suspended from said member, carrying at its lower extremity an explosive, and means for disconnecting the balloon and explosive, consisting of a block having a groove in the face thereof, along which the rope passes, a cutting-blade arranged across said groove and means for operating the knife-blade to sever the rope, substantially as shown and described.

4. A device of the class described, comprising a balloon member, and explosive members, means for connecting the same, comprising a circular or other suitably-shaped support connected horizontally with the balloon-netting and at the lower end thereof, a suspending-yoke connected with said support at diametrically opposite points, from which said explosive members are suspended, and means for automatically severing the connection between the balloon member and the explosive members, substantially as and for the purpose set forth.

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