Jan. 9, 1945. H. F. JACKMAN 2,367,027

TOY GRENADE

Filed April 7, 1944

Fig. 1.

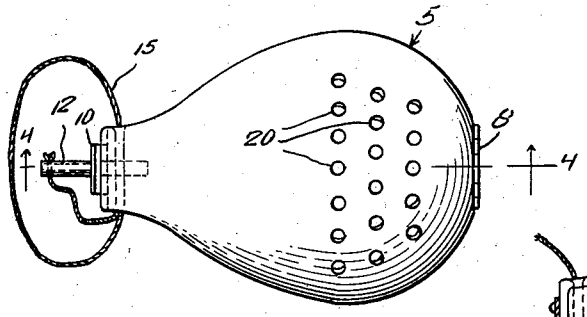


Fig. 3.

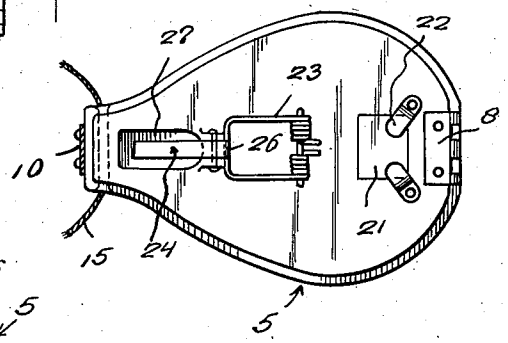


Fig. 2.

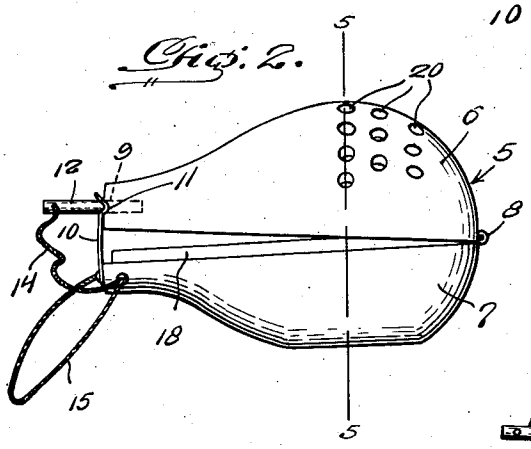


Fig. 4.

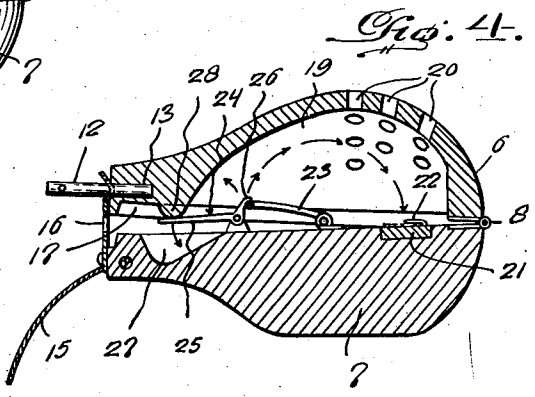
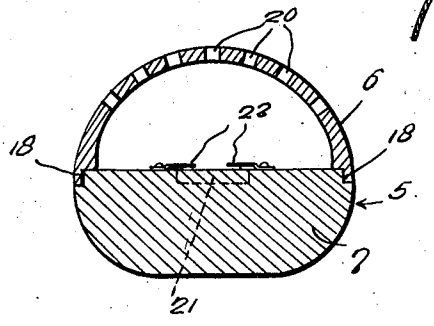


Fig. 5.



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TOY GRENADE

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Application April 7, 1944, Serial No. 529,975

7 Claims. (Cl. 46—200)

This invention relates to a toy hand grenade which will afford a maximum amount of amusement by providing a device which closely resembles a grenade used for war purposes and also which is similarly used and operated.

The primary object of the invention is the provision of a device of the above stated character which includes in its use small explosive caps and a construction in which they may be placed and fired by concussion such as would be had by the throwing of the device and the striking thereof on the ground or against some object selected as a target.

Another object of the invention is the provision of a device of the above stated character which is simple to load with a cap and set in safety position to permit handling and carrying thereof with safety and without danger of accidental explosion of the cap, and which may be quickly released for firing when thrown against the ground or against some object.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawing, in which

Figure 1 is a top plan view illustrating a toy hand grenade constructed in accordance with my invention.

Figure 2 is a side elevation illustrating the device and set in safety position.

Figure 3 is a plan view illustrating one of the sections of the device.

Figure 4 is a vertical sectional view taken on the line 4—4 of Figure 1 showing the device in safety position.

Figure 5 is a transverse sectional view taken on the line 5—5 of Figure 2.

Referring in detail to the drawing, the numeral 5 indicates a body constructed of any material suitable for the purpose which will provide the necessary rigidity to the body and the latter consists of sections 6 and 7 hingedly connected, as at 8, whereby the sections may be swung apart to expose the opposing faces thereof. The body is preferably of substantially pear shape resembling to a great extent a grenade used for war purposes.

The free end of the section 6 has formed therein a groove 9 to be engaged by a spring catch 10 secured on the free end of the section 7. The spring catch 10 is in the form of a leaf spring having an offset 11 to enter the notch or groove 9. The length of the spring catch is sufficient to maintain the sections 6 and 7 partly separated when the offset 11 is in the groove. An impact of the body against an object or the ground will bring about dislodgment of the offset 11 from the groove 9 permitting the sections to move together.

The spring catch has an opening in the offset 11 thereof to receive a removable pin 12 which may be inserted in a socket 13 formed in the section 6. The pin wedges into the socket 13 and will prevent the spring catch or the offset 11 thereof from accidentally moving out of the groove 9 of the section 6. Consequently the pin 12 must be withdrawn before throwing the device to bring about disengagement of the spring catch from the groove which results in the sections 6 and 7 moving completely together under the influence of the impact of the body against an object.

To prevent loss or misplacement of the pin 12 when withdrawn from the socket it is connected to the section 7 by a flexible element 14. The flexible element may also include a loop portion 15 convenient for the carrying of the device from place to place.

The spring catch 10 also is provided with an opening 16 which may be brought into alignment with the socket 13 and the pin inserted through the opening into the socket 13 for securing the sections 6 and 7 completely closed when the device is not in use. The section 6 has an internal groove 17 to receive a flange 18 formed on the section 7 when said sections are in full closed position, to prevent foreign matter from entering the interior of the sections. This is desirable when the deveice is not in use.

The section 6 is provided with a comparatively large chamber 19 and also a series of perforations or openings 20 leading into the chamber from the exterior of the section 6. The purpose of the openings 20 is to permit sound to escape as well as smoke from an explosion taking place within the chamber.

The section 7 is provided with a rest 21 on which may be arranged a cap and removably held thereon by spring clips 22. The cap is preferably of the type that is used in toy pistols and similar devices.

A spring influenced hammer 23 is hingedly mounted on the section 7 and is self-propelling to engage the cap with sufficient force to bring about the explosion thereof. To hold the hammer 23 in a tensioned position, a trigger 24 is provided and is pivotally mounted on the section 7 and includes a treadle portion 25 and a hook shaped portion 26

engaging the spring influenced hammer to retain the same in a tensioned position, as shown in Figure 4. The treadle overlies a recess 27 provided in the section 7 and when the device is in a set position is engaged by a lug 28 formed on the section 6, as shown in Figure 4, the purpose of the recess 27 being to permit sufficient movement of the treadle on its pivot to disengage the hook shaped portion from the hammer when the sections 6 and 7 move together from the force of an impact against an object.

Thus it will be seen that when the device is thrown and receives the effect of an impact the trigger will be released from the hammer and the latter will strike the cap and bring about its explosion, the report escaping by way of the apertures 20 as well as the smoke from the explosion, giving a realistic effect of an exploding grenade.

It is to be understood that after the cap has been placed in position on the rest 21 the spring catch is brought into the groove 9 and the pin 12 inserted through one of the openings of the spring catch into the socket 13. Of course, it is understood that prior to this operation the hammer is moved into tensioned position and held there by the trigger being manually held against pivotal movement until the lug 28 engages with the trigger and the catch engaged in the groove 9. The device thus arranged can be safely carried from place to place without danger of going off, and prior to desiring the explosion of the cap and the throwing of the device the pin 12 is removed so that when the device is thrown and strikes an object the spring catch will disengage from the groove 9 permitting the sections to move together under the force of the impact which brings about disengagement of the trigger from the hammer and the latter being self-propelled strikes the cap and brings about the explosion thereof.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described the invention, what I claim is:

1. In a toy hand grenade, movably connected opposed body members capable of movement into abutting engagement with each other, means for supporting an explosive cap on one of said members, means releasably securing said members a limited distance apart and releasable by the impact of the members being thrown against an object, and a firing means for the cap releasably held in set position by the members when retained a limited distance apart, said firing means being self-operable to explode the cap and automatically released from detention on said members moving together by the impact thereof against the object.

2. In a toy hand grenade, a substantially pear shaped body including opposed sections hingedly connected at one end and one of said sections having a groove in its end opposite the hinged end, a spring catch having an offset secured to the opposite section and adapted to fit in said groove for releasably securing the sections slightly parted from each other and adapted to release the sections by said sections receiving an impact against an object causing the sections to move into abutting engagement with each other, an explosive cap carried by one of said sections, a self-propelled hammer for exploding the cap, and a trigger means carried by the latter-named section and holding the hammer in set position and engaging the other section to prevent release of the hammer until said sections are operated by the impact against the object.

3. In a toy hand grenade, a body of substantially pear shape and including hingedly connected sections, one of said sections having a groove, a spring catch carried by the other section and to engage the groove for releasably securing the sections slightly parted from each other, means for supporting a cap on one of said sections, said other section having a chamber, a self-propelled hammer for exploding the cap and movable within the chamber, a pivoted trigger engaging the hammer to hold the latter in a set position, a lug on one of said sections to engage the trigger to prevent the release thereof from the hammer during the partial separation of the sections and adapted to be released from the hammer by the sections moving into abutting engagement.

4. In a toy hand grenade, a body of substantially pear shape and including hingedly connected sections, one of said sections having a groove, a spring catch carried by the other section and to engage the groove for releasably securing the sections slightly parted from each other, means for supporting a cap on one of said sections, said other section having a chamber, a self-propelled hammer for exploding the cap and movable within the chamber, a pivoted trigger engaging the hammer to hold the latter in a set position, a lug on one of said sections to engage the trigger to prevent the release thereof from the hammer during the partial separation of the sections and adapted to be released from the hammer by the sections moving into abutting engagement, a removable safety pin retaining the catch in the groove.

5. In a toy hand grenade, a body of substantially pear shape and including hingedly connected sections, one of said sections having a groove, a spring catch carried by the other section and to engage the groove for releasably securing the sections slightly parted from each other, means for supporting a cap on one of said sections, said other section having a chamber, a self-propelled hammer for exploding the cap and movable within the chamber, a pivoted trigger engaging the hammer to hold the latter in a set position, a lug on one of said sections to engage the trigger to prevent the release thereof from the hammer during the partial separation of the sections and adapted to be released from the hammer by the sections moving into abutting engagement, a removable safety pin retaining the catch in the groove, one of said sections having a pocket to receive the trigger when actuated by the sections moving into abutting engagement.

6. In a toy hand grenade, a body of substantially pear shape and including hingedly connected sections, one of said sections having a groove, a spring catch carried by the other section and to engage the groove for releasably securing the sections slightly parted from each other, means for supporting a cap on one of said sections, said other section having a chamber, a self-propelled hammer for exploding the cap and movable within the chamber, a pivoted trigger engaging the hammer to hold the latter in a set position, a lug on one of said sections to engage the trigger to prevent the release thereof from the hammer during the partial separation of the sections and adapted to be released from the hammer by the sections moving into

abutting engagement, a removable safety pin retaining the catch in the groove, one of said sections having a pocket to receive the trigger when actuated by the sections moving into abutting engagement, one of said sections having ports connecting with the chamber to permit sound and smoke to escape therefrom.

7. In a toy hand grenade, a body of substantially pear shape and including hingedly connected sections, one of said sections having a groove, a spring catch carried by the other section and to engage the groove for releasably securing the sections slightly parted from each other, means for supporting a cap on one of said sections, said other section having a chamber, a self-propelled hammer for exploding the cap and movable within the chamber, a pivoted trigger engaging the hammer to hold the latter in a set position, a lug on one of said sections to engage the trigger to prevent the release thereof from the hammer during the partial separation of the sections and adapted to be released from the hammer by the sections moving into abutting engagement, a removable safety pin retaining the catch in the groove, one of said sections having a pocket to receive the trigger when actuated by the sections moving into abutting engagement, one of said sections having ports connecting with the chamber to permit sound and smoke to escape therefrom, and a flexible element connected to one of said sections to act as a handle and to the safety pin to prevent loss thereof when detached from one of said sections.

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