

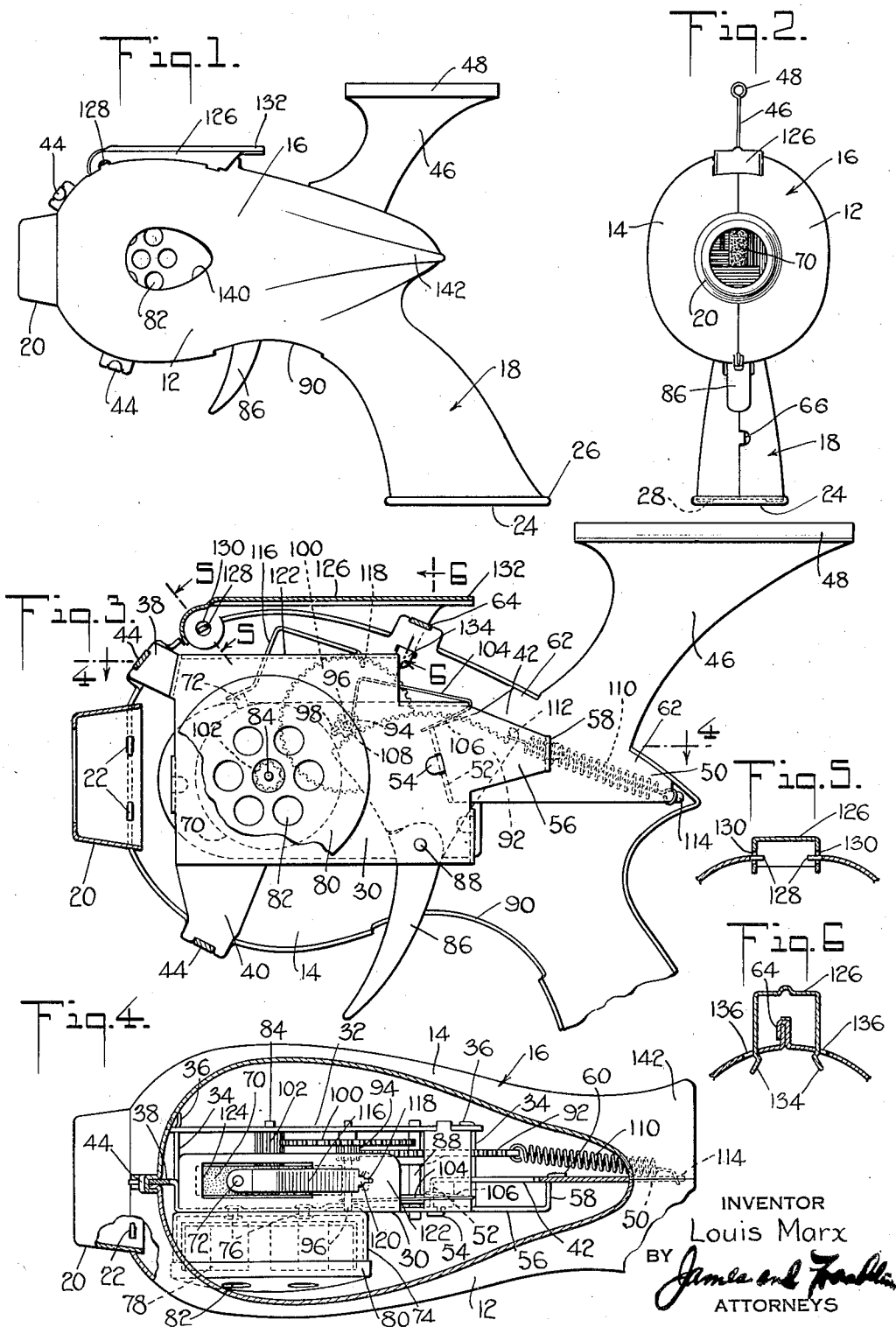
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FUTURISTIC TOY WEAPON

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FUTURISTIC TOY WEAPON

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12 Claims. (Cl. 46—10)

This invention relates to toys, and more particularly to a futuristic toy weapon.

The object of my invention resides in the provision of a futuristic toy weapon which is harmless and fool-proof in operation and thereby adapted for use by small children. The weapon preferably comprises a combination of sparking and siren mechanisms, thereby producing both an optical and a sound effect. The casing is preferably hollow and bulbous in configuration in order to give the same a weird appearance.

The mechanisms are mounted in a motor frame, and in accordance with one feature and object of my invention the motor frame is secured centrally within the bulbous body by arms extending outwardly from the frame and secured between outwardly pressed convex sides which are secured in edge to edge relation to form the body of the weapon. In accordance with a further object of my invention one of these arms may be extended upwardly through the body to form a sight vane, and this in turn may be rolled at its upper edge to form a sight tube.

Other objects of my invention center about the drive mechanism for the weapon and include the provision of a single trigger for actuating both the siren and sparking mechanisms; the provision of suitable overrunning gear mechanism in the driving gear train to afford free overrunning of the siren when the trigger is actuated, as well as continued operation by repeated actuations of the trigger; and the provision of a restoring spring for the trigger and an appropriate mounting for the same on the motor frame.

To the accomplishment of the foregoing and other objects which will hereinafter appear, my invention consists in the toy weapon elements and their relation one to the other as are hereinafter more particularly described in the specification and sought to be defined in the claims. The specification is accompanied by drawing, in which:

Fig. 1 is a side elevation of a futuristic toy weapon embodying features of my invention;

Fig. 2 is a front elevation of the same;

Fig. 3 is a section taken in elevation through the central plane of the weapon;

Fig. 4 is a horizontal section taken in the plane of the line 4—4 in Fig. 3;

Fig. 5 is a section taken in the plane of the line 5—5 in Fig. 3; and

Fig. 6 is a section taken in the plane of the line 6—6 in Fig. 3.

Referring to the drawing, the futuristic toy weapon comprises a sheet metal casing made of outwardly pressed or convex sides 12 and 14 se-

cured together in edge to edge relation to form a hollow bulbous body portion 16 and contiguous handle portion 18. A muzzle ring 20 is secured between the sides of the body at the forward end thereof and is held in place by appropriate tongues 22 (Figs. 3 and 4) formed on the body and passing through mating slots in ring 20. The handle 18 is completed by a bottom plate 24 having an upwardly curled edge 26 and secured to the handle by tongues 28 passing through and turned beneath plate 24.

The mechanism of the weapon is carried by a frame comprising side plates 30 and 32 secured together in spaced parallel relation by arms 34 bent from side plate 30 and having tongues 36 passing through mating slots in side plate 32. The motor frame is narrow and is supported centrally of the hollow body 16 by support arms 38, 40, and 42. Arms 38 and 40 are formed integrally with side plate 30 and are dimensioned to be secured between the edges of the sides 12 and 14 of the body. Lugs are bent outwardly from the body at the ends of arms 38 and 40 and are provided with bent tongue connections 44 which operate to hold the sides of the body together with the motor frame in proper position.

The support arm 42 is in the present case extended upwardly out of the body to form a sight vane 46 having a sight tube 48 rolled at the upper edge thereof, and is also extended rearwardly within the body to form a spring anchorage 50. Because of the size of this member, I find it economical to make the same of a separate piece of sheet metal rigidly secured to the motor frame, and for this purpose the inner end of support arm 42 is bent sidewardly at 52 (Fig. 4) and is provided with a tongue 54 passing through a slot in side plate 30. The latter is extended rearwardly at 56 and bent sidewardly at 58, and locked to the support arm 42 by a tongue and slot connection 60. Support arm 42, like the other support arms, is secured between the sides of the body, and in this case the shoulders 62 (Fig. 3) at each side of sight vane 46 help fix the location of the frame within the body. The sides of the body are held together by an additional tongue connection 64 at the top of the body, and one or more connections 66 at the handle portion, as well as by bottom plate 24 of the handle.

The sparking mechanism includes an abrasive wheel 70 and a pyrophoric element 72 which may be conveniently referred to as a flint. The siren mechanism comprises a cylindrical casing 74 secured to the side of frame plate 30 by appropriate

rivets 76 and a bladed rotor 78 rotatable within the casing. The outer face of the latter is closed by a cap 80 having sound discharge openings 82.

5 Siren rotor 78 and abrasive wheel 70 are preferably mounted on a common shaft 84 journaled in the motor frame. Shaft 84 is arranged to be actuated by a trigger 86 pivoted at 88 in the motor frame and depending from the motor
10 frame through a space or slot 90 between the sides of the body. Trigger 86 is formed from a piece of reversely bent sheet metal one side of which is projected upwardly to form a gear sector 92. Gear sector 92 meshes with a pinion
15 94 mounted on a spindle 96 carried in slotted bearings 98 in the frame plates. Spindle 96 also carries a gear 100 adapted when moved forwardly to engage a pinion 102 on the siren shaft
20 84. The arrangement is such that when trigger 86 is pulled rearwardly, gear 100 is moved into engagement with pinion 102, and rapid rotation is imparted to the abrasive wheel 70 and the siren rotor 78. When the trigger movement is
25 completed, however, the continued rotation of the siren tends to cause disengagement of the gear 100, thereby affording free overrunning movement of the siren and sparking mechanisms. To insure disengagement of gear 100, I
30 prefer to add a thin wire cantilever spring 104 the fixed end 106 of which is anchored in the motor frame, and the movable end 108 of which is curled around spindle 96 and tends normally to move upwardly or rearwardly.

The trigger is restored to normal or forward
35 position by a pull spring 110 tensioned between a hook 112 on gear sector 92 and an anchorage lug 114 formed at the rear end of the arm 50. It will be understood that with this arrangement the trigger may be actuated and the siren is per-
40 mitted to race or overrun even during restoring movement of the trigger. It is therefore possible to actuate the trigger successive times in order to produce a sustained or accelerated rotation of the siren.

45 The flint 72 of the sparking mechanism is preferably mounted at the forward end of a flint holder 116 the end 118 of which is given a T shape and detachably inserted in a keyhole slot 120 formed on a support plate 122 at the top of
50 the motor frame. Plate 122 is preferably formed by sidewardly bending the upper part of side plate 30, and is cut away to form a window 124 over abrasive wheel 70. The flint rests loosely or floatingly on the abrasive wheel but is pre-
55 vented from moving sidewardly off the periphery of the wheel by the sides of window 124 through which the support arm or flint holder 116 passes. As is best shown in Fig. 4, the sparking mechanism is preferably located centrally of the weapon, thereby causing a shower of sparks to pass
60 through the muzzle ring 20.

For access to the flint holder, I provide a channel-shaped guard 126 over flint holder 116. The forward end of the guard is provided with
65 bearing holes 128 which receive bearing lugs 130 formed at the sides of the casing or body of the weapon. It will be understood that the guard is readily mounted in place when the toy is being assembled, by simply placing the same between
70 the halves of the body, just as is the case with the motor frame and the muzzle ring. The rear end of the guard is extended to form a finger piece 132 which facilitates opening of the guard as well as enhances its appearance. The guard
75 is normally kept closed by spring fingers 134

(Fig. 6) which pass through slots 136 at the top of the weapon.

The side 12 of the body is preferably cut away to form a sound discharge window 140 (Fig. 1) located at the siren discharge openings 82. The
5 window 140 may be shaped as shown, in conformity with the rearwardly tapering configuration of body portion 16.

The sides of the body may be pressed outwardly to form sidewardly projecting horizontal
10 fins 142, best shown in Figs. 1 and 4. This construction taken together with the configuration of the body, handle, sight vane 43, and guard 126, give the toy a strange or futuristic appearance which enhances its play value, and it is
15 consistent with the futuristic nature of the toy that I prefer to use a siren sound during its operation. The siren sound and the sparking at the muzzle of the gun together symbolize the production of a fatal ray such as is often re-
20 ferred to in newspaper adventure strips.

It is believed that the mode of constructing and using, as well as the many advantages of my futuristic toy weapon, will be apparent from the foregoing detailed description thereof. It
25 will also be apparent that while I have shown and described my invention in preferred form, many changes and modifications may be made in the structure disclosed, without departing from the spirit of the invention defined in the
30 following claims.

I claim:

1. A futuristic toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a
35 bulbous body portion and contiguous handle portion, a frame in said body, said frame comprising spaced side plates and support arms extending outwardly therefrom and secured between the meeting edges of the sides of the body, a trigger
40 pivoted in said frame and depending through a slot in said body, and mechanism mounted in said frame and arranged for actuation by said trigger.

2. A toy weapon comprising a body made of two oppositely convexed pieces of sheet metal
45 placed in edge to edge relation to form a body portion and contiguous handle portion simulating a weapon having a muzzle, a motor frame in said body, said frame comprising spaced side plates having support arms extending outwardly there-
50 from and secured between the meeting edges of the sides of the body, a trigger pivoted in said frame and depending through a slot in said body, and sparking and siren mechanisms mounted in said frame and geared for actuation by said
55 trigger, said gearing providing high-speed unidirectional rotation of the sparking and siren mechanisms, and said sparking mechanism being so located as to throw a stream of sparks out of the muzzle of the weapon.
60

3. A futuristic toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a
65 bulbous body portion and contiguous handle portion simulating a weapon having a muzzle, a muzzle ring secured at the forward end of the body between the sides thereof, a motor frame in said body, said frame comprising spaced side plates having support arms extending outwardly therefrom and secured between the meeting edges
70 of the sides of the body, a trigger pivoted in said frame and depending through a slot in said body, and sparking and siren mechanisms mounted in said frame and geared for actuation by said
75 trigger, said gearing providing high-speed uni-

directional rotation of the sparking and siren mechanisms, and said sparking mechanism being so located as to throw a stream of sparks out of the muzzle of the weapon.

4. A futuristic toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a bulbous body portion and contiguous handle portion, a motor frame in said body, said frame comprising spaced side plates and support arms extending outwardly therefrom and secured between the meeting edges of the sides of the body, one of said support arms being projected beyond the body to form a large sight vane with a sight tube at the top edge thereof, a trigger pivoted in said frame and depending through a slot in said body, and mechanism mounted in said frame and arranged for actuation by said trigger.

5. A futuristic toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a bulbous body portion and contiguous handle portion simulating a weapon having a muzzle, a motor frame in said body, a trigger pivoted in said frame and depending through a slot in said body, and sparking mechanism mounted in said frame and geared for actuation by said trigger, said sparking mechanism including an abrasive wheel and a detachable floatingly mounted flint holder resting thereon, and a relatively large guard at the top edge of said body having one end pivoted between the side edges thereof to afford opening of the guard for access to and replacement of the flint holder, said gearing providing high-speed uni-directional rotation of the sparking mechanism, and said sparking mechanism being so located as to throw a stream of sparks out of the muzzle of the weapon.

6. A futuristic toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a bulbous body portion and contiguous handle portion simulating a weapon having a muzzle, a motor frame in said body, said frame comprising spaced side plates having support arms extending outwardly therefrom and secured between the meeting edges of the sides of the body, one of said support arms being projected beyond the body to form a sight vane, a trigger pivoted in said frame and depending through a slot in said body, and sparking mechanism mounted in said frame and geared for actuation by said trigger, said sparking mechanism including an abrasive wheel and a detachable floatingly mounted flint holder resting thereon, and an openable guard at the top edge of said body pivoted between the side edges thereof for access to the flint holder, said gearing providing high-speed uni-directional rotation of the sparking mechanism, and said sparking mechanism being so located as to throw a stream of sparks out of the muzzle of the weapon.

7. A futuristic toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a bulbous body portion and contiguous handle portion, a muzzle ring secured at the forward end of the body between the sides thereof, a motor frame in said body, a trigger pivoted in said frame and depending through a slot in said body, sparking and siren mechanisms mounted in said frame and geared for actuation by said trigger, said sparking mechanism including an abrasive wheel and a detachable freely floatingly mounted flint holder resting thereon at approximately the

center plane of the weapon in back of the aforesaid muzzle ring, and an openable guard at the top edge of said body pivoted between the side edges thereof for access to the flint holder, said gearing providing high-speed uni-directional rotation of the sparking and siren mechanisms.

8. A futuristic toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a bulbous body portion and contiguous handle portion, a muzzle ring secured at the forward end of the body between the sides thereof, a motor frame in said body, said frame comprising spaced side plates and support arms extending outwardly therefrom and secured between the meeting edges of the sides of the body, one of said support arms being projected beyond the body to form a sight vane with a sight tube at the top edge thereof, a trigger pivoted in said frame and depending through a slot in said body, and sparking and siren mechanisms mounted in said frame and geared for actuation by said trigger, said gearing providing high-speed uni-directional rotation of the sparking and siren mechanisms, and said sparking mechanism being so located as to throw a stream of sparks out of the muzzle of the weapon.

9. A toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a body portion and contiguous handle portion, a muzzle ring secured at the forward end of the body between the sides thereof, a motor frame in said body, said frame comprising spaced side plates and support arms extending outwardly therefrom and secured between the meeting edges of the sides of the body, one of said support arms being projected beyond the body to form a sight vane with a sight tube, a trigger pivoted in said frame and depending through a slot in said body, sparking and siren mechanisms mounted in said frame and geared for actuation by said trigger, said sparking mechanism including an abrasive wheel and a detachable floatingly mounted flint holder resting thereon at approximately the center plane of the weapon in back of the aforesaid muzzle ring, and an openable guard at the top edge of said body pivoted between the side edges thereof for access to the flint holder, said gearing providing high-speed uni-directional rotation of the sparking and siren mechanisms.

10. A toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a bulbous body portion and contiguous handle portion simulating a weapon having a muzzle, actuated siren and sparking mechanism in said body, said mechanism comprising a motor frame including two frame plates secured in spaced relation and having outwardly extending support arms secured between the halves of the body, one of said support arms being extended rearwardly to form a spring anchorage, a trigger pivoted in said frame and having a gear sector formed integrally therewith, a tension spring connected between said gear sector and said rearwardly extending spring anchorage in order to normally pull the gear sector rearwardly, and a step-up gear train interconnecting the gear sector and the aforesaid siren and sparking mechanism.

11. A toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a bulbous body portion and contiguous handle portion simulating a weapon having a muzzle, actuated siren and sparking mechanism in said body, said mech-

anism comprising a motor frame including two frame plates secured in spaced relation and having outwardly extending support arms secured between the halves of the body, one of said support arms being extended rearwardly to form a spring anchorage, a trigger pivoted in said frame and having a gear sector formed integrally therewith, a tension spring connected between said gear sector and said rearwardly extending spring anchorage in order to normally pull the gear sector rearwardly, a step-up gear train interconnecting the gear sector and the aforesaid siren and sparking mechanism, at least one gear in said train being mounted on a shaft carried in slot-like bearings affording engagement or disengagement of the gear, the direction of movement of the gears being such that when the trigger is actuated the gear is moved into engaged position.

12. A toy weapon comprising a body made of two oppositely convexed pieces of sheet metal placed in edge to edge relation to form a bulbous body portion and contiguous handle portion simulating a weapon having a muzzle, actuated siren

and sparking mechanism in said body, said mechanism comprising a motor frame including two frame plates secured in spaced relation and having outwardly extending support arms secured between the halves of the body, one of said support arms being extended upwardly to form a sight vane and being extended rearwardly to form a spring anchorage, a trigger pivoted in said frame and having a gear sector formed integrally therewith, a tension spring connected between said gear sector and said rearwardly extending spring anchorage in order to normally pull the gear sector rearwardly, a step-up gear train interconnecting the gear sector and the aforesaid siren and sparking mechanism, at least one gear in said train being mounted on a shaft carried in slot-like bearings affording engagement or disengagement of the gear, resilient means normally urging the gear to disengaged position, the direction of movement of the gears being such that when the trigger is actuated the gear is moved into engaged position.

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