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(54) **DEVICE ALLOWING RADIO CONTROLLED VEHICLES TO PLAY TAG**

(76) Inventors: **Chad Nelson Kerr**, LaGrange, OH (US); **Neal James Kerr**, LaGrange, OH (US)

Correspondence Address:
CHAD KERR
17235 FAIRWAY
LAGRANGE, OH 44050 (US)

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(57) **ABSTRACT**

The invention relates to a series of radio controlled vehicles or objects used to play the popular game of tag. Each vehicle or object used to play tag is specially built to contain a means of disabling the vehicle when tagged. In one series the tag zone is positioned in the rear bumper. The second series contains 3 tag zones on the vehicle. The third series contains multiple tag zones on the object being used. Competitors race their vehicles or objects around a contained area trying desperately to tag their opponents in each of the tag zones located on their challengers' vehicles, while trying to avoid from being tagged themselves. Vehicles with multiple tag zones require the competitors to tag each tag zone with their front bumper. The opponent's vehicle will not be disabled until all the tag zones have been tagged in any random sequence. Zone lights will indicate which zone has been tagged. When the last zone light is activated the vehicle's engine is shut down. Once a vehicle is disabled he/she is out of competition until a winner is decided. The vehicles that are knocked out of the game are disabled until each vehicle is reactivated to enter a new game.

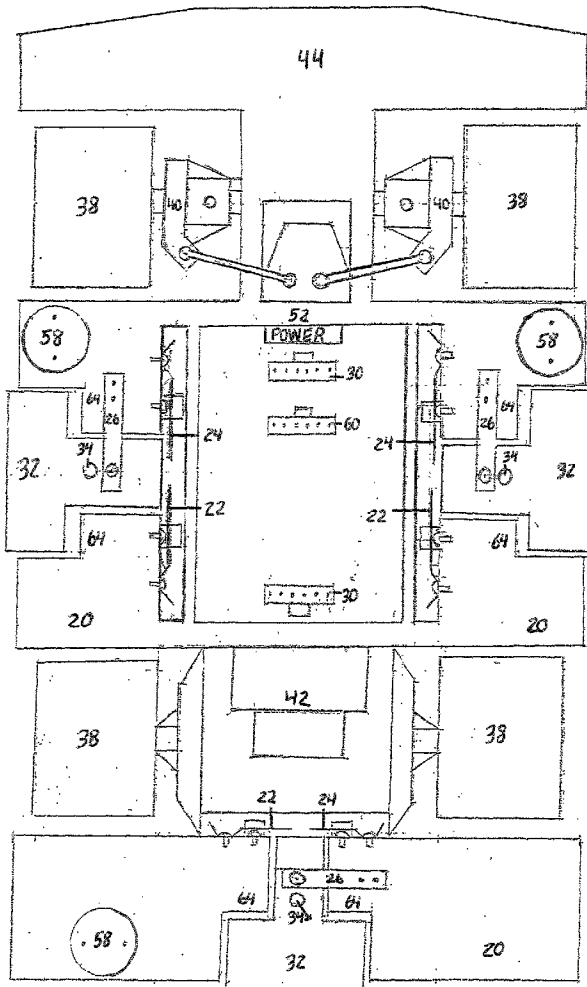


Fig. 1

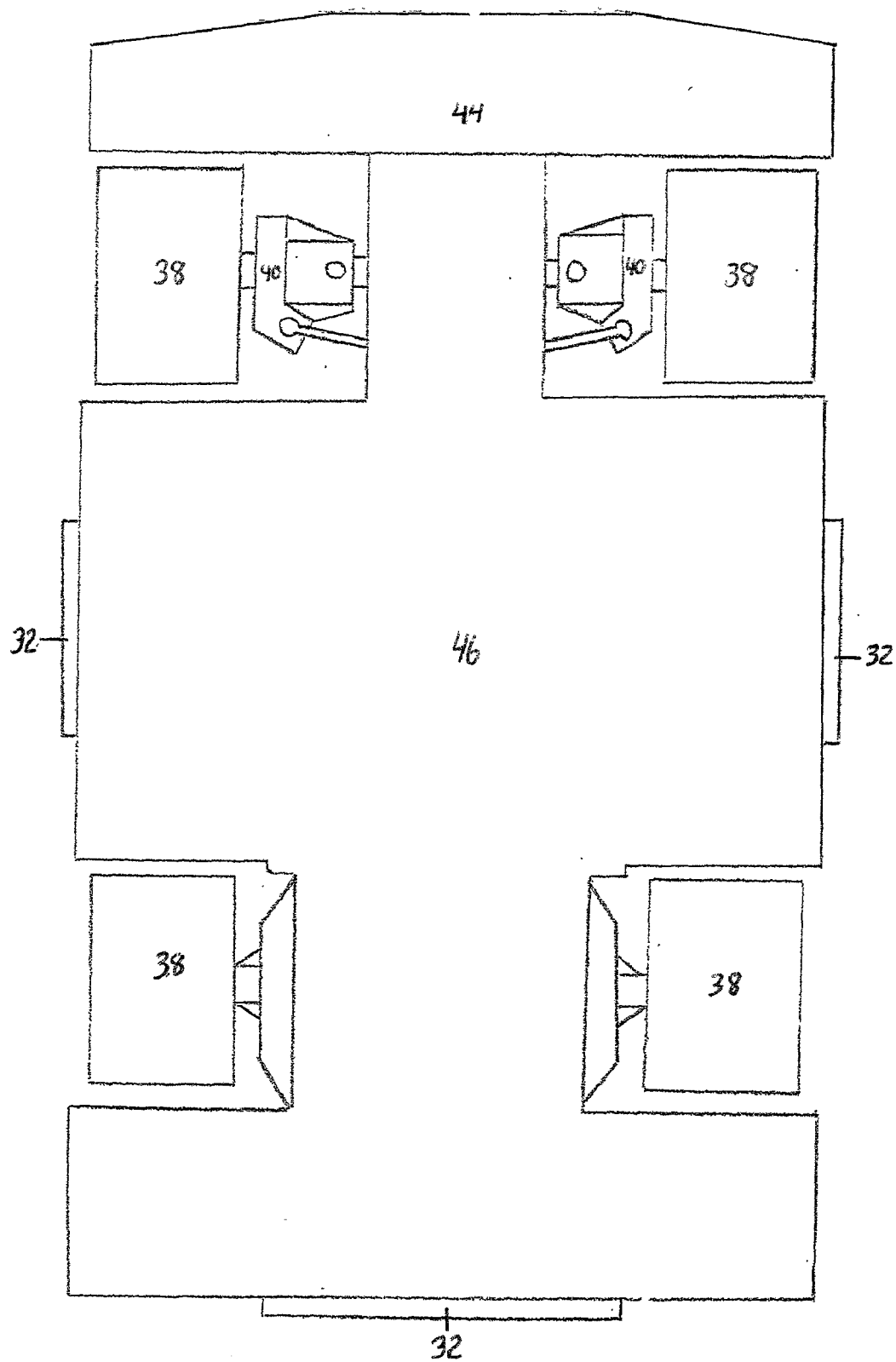


Fig. 2

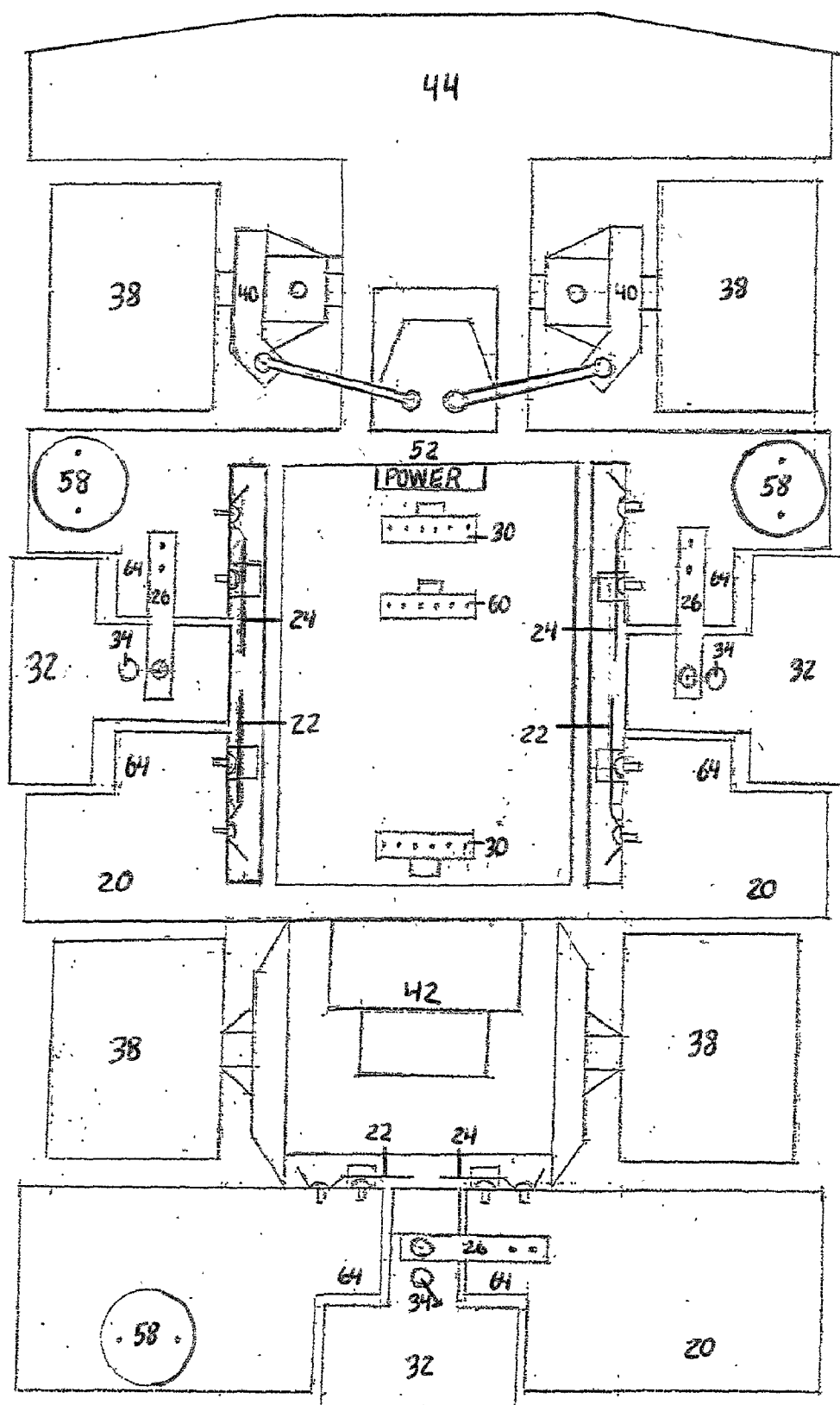


Fig. 3

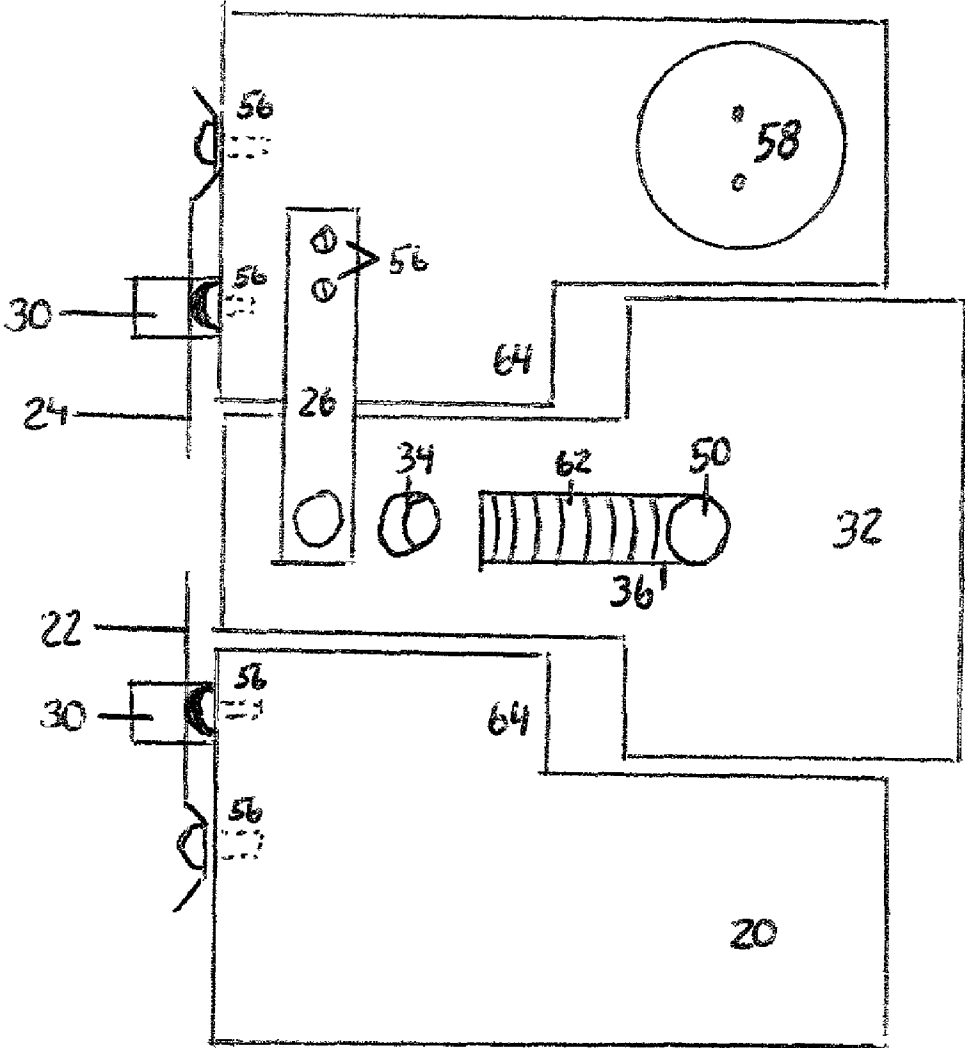
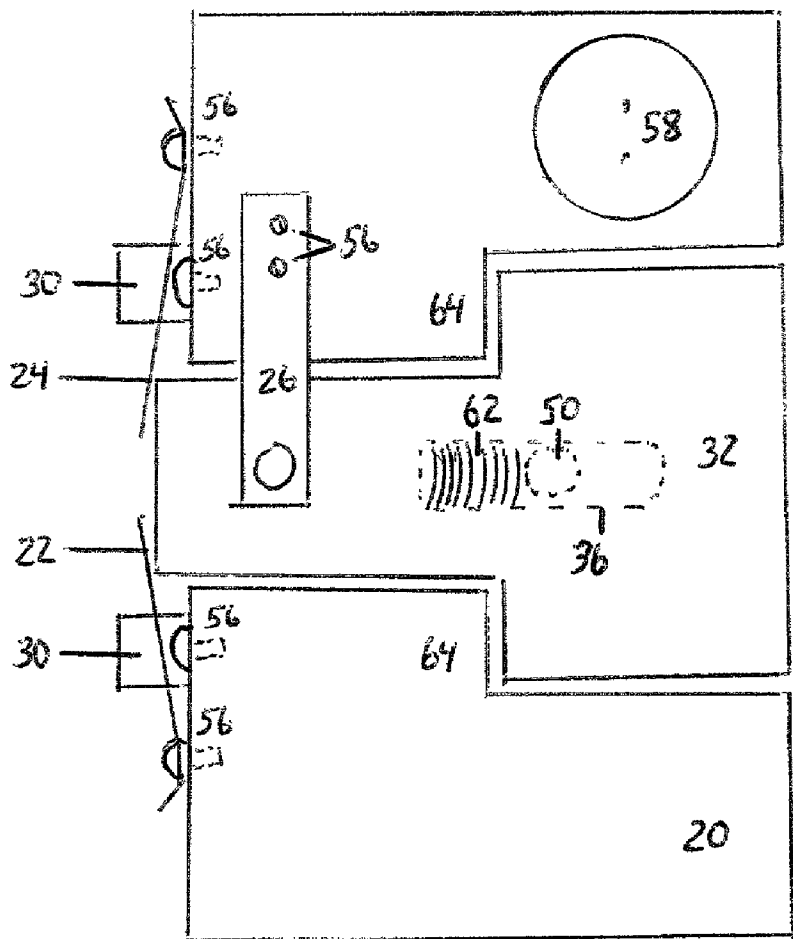


Fig. 4



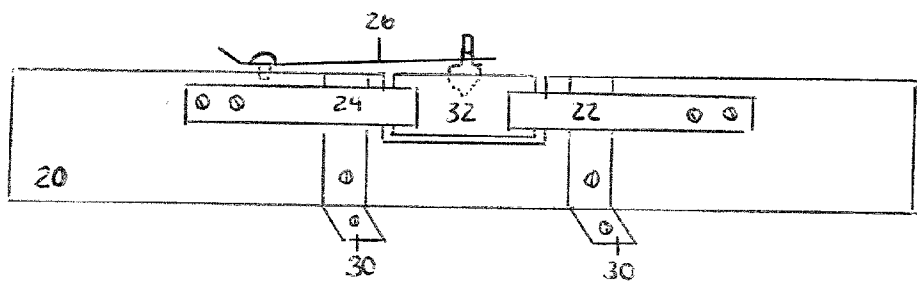


Fig. 5

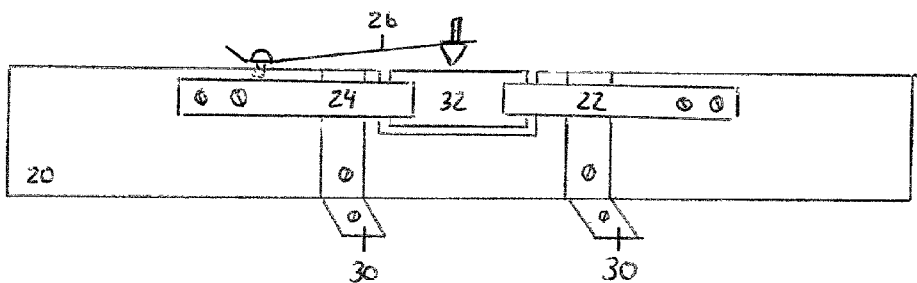


Fig. 6

Fig. 7

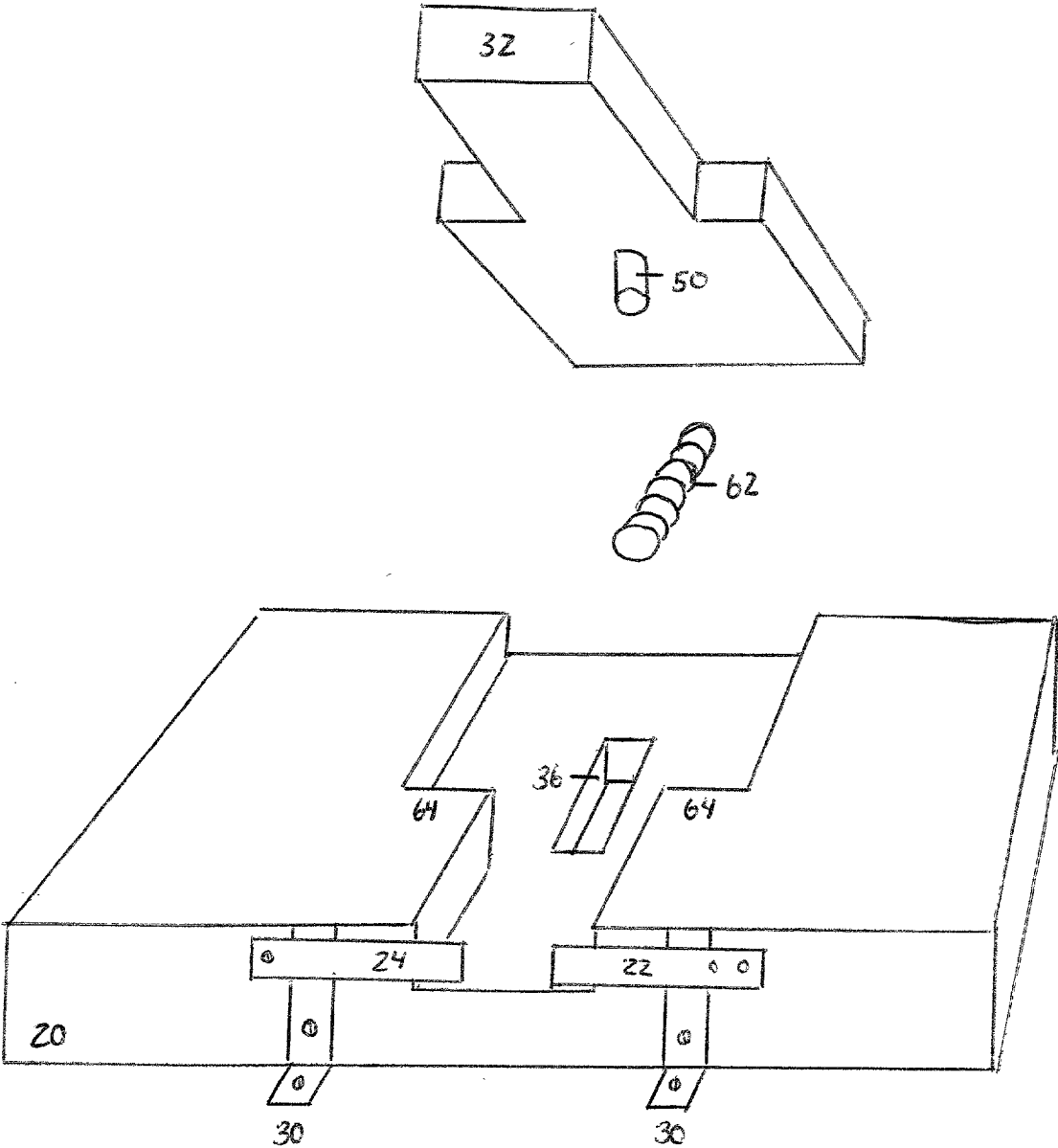


Fig. 8

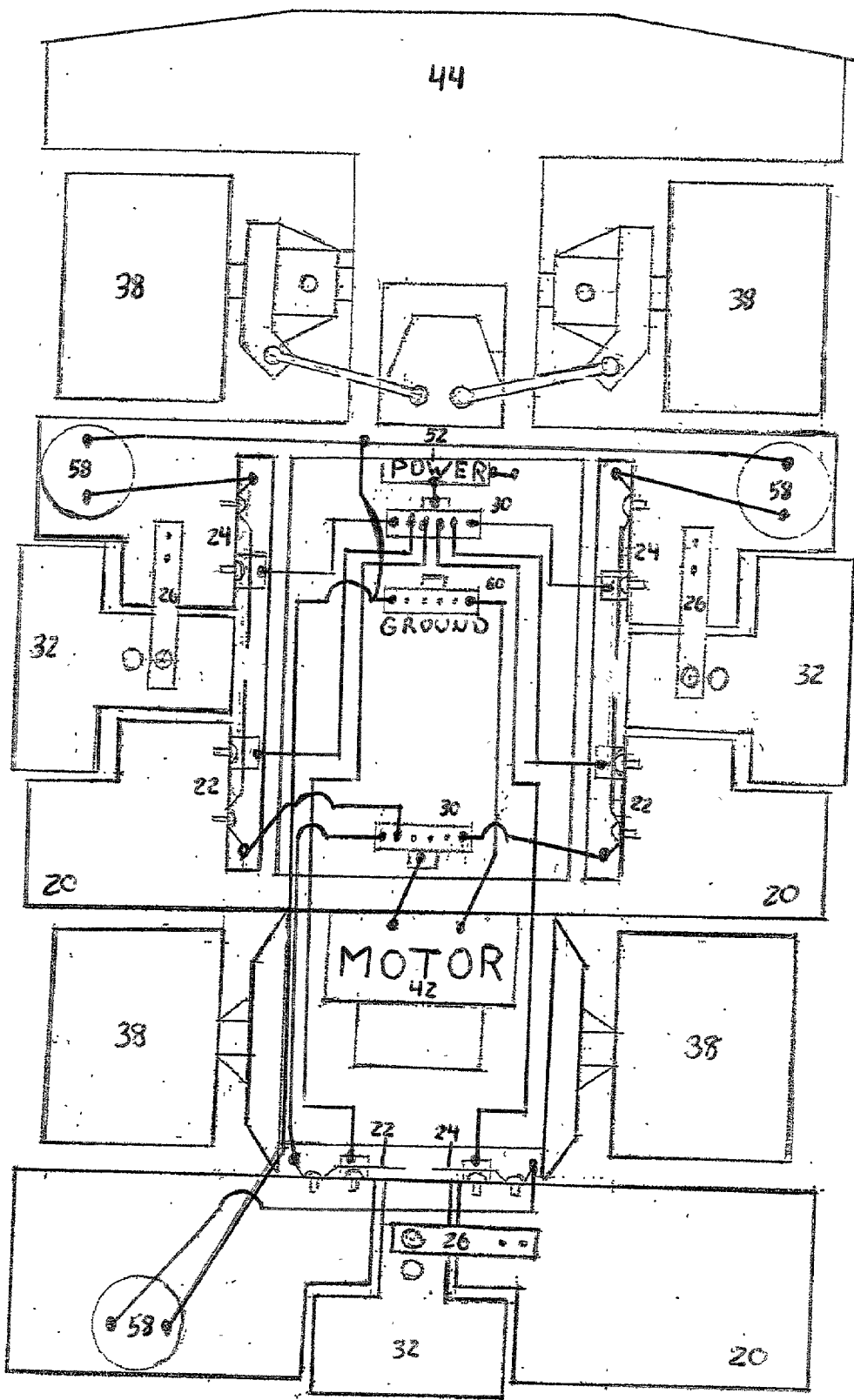
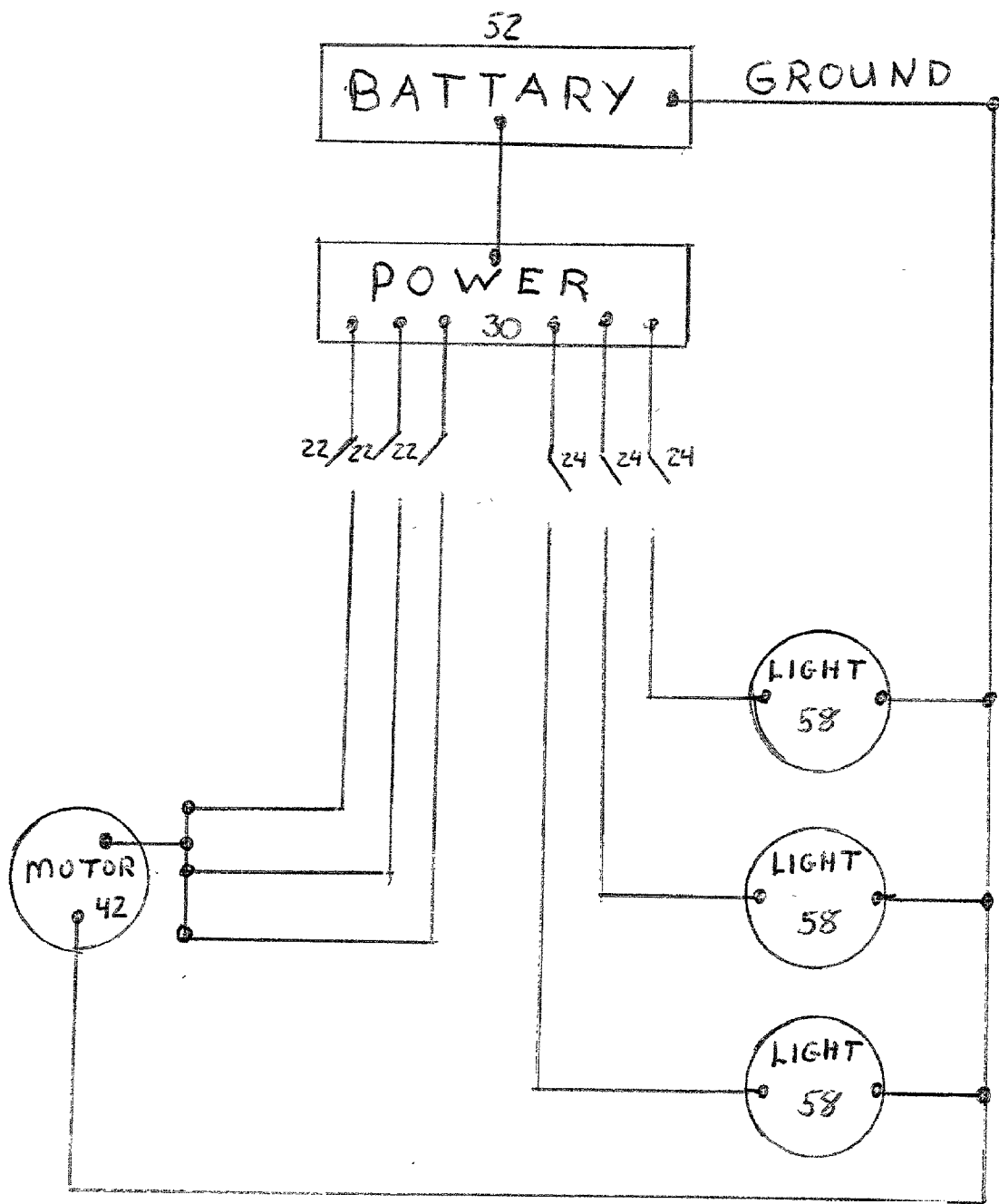


Fig. 9



DEVICE ALLOWING RADIO CONTROLLED VEHICLES TO PLAY TAG

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] No device is known allowing radio controlled vehicles to play the popular game of tag.

BACKGROUND OF THE INVENTION

[0002] The present invention relates to radio controlled vehicles used in the popular game of tag. More specifically, the present invention relates to a device allowing radio-controlled vehicles to be disabled when tagged by an opponent.

[0003] Radio controlled vehicles are well known, appealing to kids as well as those who take it up as a hobby. These vehicles have developed in technology providing hours of fun for all. Those who take up radio controlled vehicles as a hobby spend a lot of time and money in this field.

[0004] The game of tag is a popular childhood game played among friends. Kids run around a contained area chasing each other until caught and tagged.

[0005] Every child in America has played some form of the game of tag and it's the intent of the inventors to combine the game of tag with radio controlled vehicles.

BRIEF SUMMARY OF THE INVENTION

[0006] The principal object of the present invention is to provide a device allowing radio-controlled vehicles to play the popular game of tag.

[0007] In one form of the invention, a player operates a radio-controlled vehicle that is designed to contain a kill switch in the rear bumper known as a tag zone. This tag zone contains a means of disabling the vehicle when tagged by an opponent. Competitors race their vehicles around a contained area trying to tag their opponent's vehicle before getting tagged themselves. Opponents use their vehicle's front bumper to catch and tag their competitors.

[0008] In another form of the invention a player operates a radio-controlled vehicle, which is designed to contain 3 tag zones. The tag zones are located on the rear bumper and along each side of the vehicle. In this series the players must tag each of the 3 tag zones in any random sequence before the vehicle is disabled.

[0009] In another form of the invention a player operates a radio controlled object, which is designed to contain more tag zones than the prior two series.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a top view of a radio-controlled vehicle with the body removed exposing the chassis.

[0011] FIG. 2 is a top view of a radio-controlled vehicle with the chassis cover removed exposing the tag zones.

[0012] FIG. 3 is a top view of a tag zone from FIG. 2. This view shows a closed circuit.

[0013] FIG. 4 is a top view of a tag zone from FIG. 2. This view shows that the zone has been tagged opening the circuit in a locked position.

[0014] FIG. 5 is a rear view of FIG. 4. This view shows the lock pin locked into position.

[0015] FIG. 6 is a rear view of FIG. 3. This view shows the lock pin unlocked from the locked position.

[0016] FIG. 7 is a rear perspective view of the tag zone support frame from FIG. 2.

[0017] FIG. 8 is a top view of the electrical circuits.

[0018] FIG. 9 is an electrical circuit diagram.

DETAILED DESCRIPTION OF THE INVENTION

[0019] Although the invention is described in terms of a preferred specific embodiment and two additional embodiments, it will be readily apparent to those skilled in this art that various modifications, rearrangements and substitutions can be made without departing from the spirit of the invention. The scope of the invention is defined by the claims appended hereto.

[0020] Referring now to FIG. 1, an example of a radio controlled vehicle's chassis is shown. The chassis is generally made from aluminum or hard plastic to provide strength and durability to the vehicle. FIG. 1 additionally shows the tag zone slides 32 protruding the chassis cover 46. The tag zone slides 32 can be made of plastic, aluminum or a rubber type material covering allowing the vehicle to receive and absorb an impact from other vehicles. The tag zone slides 32 extend from the vehicle chassis 46 but the body of the vehicle covers and hides these zones from the outside appearance of the vehicle.

[0021] The chassis from FIG. 1 is designed in a way to contain and protect all four wheels from impact. The chassis cover 46 can be removed to gain access to the inner workings of the vehicle. The front bumper 44 is made of flexible plastic or rubber material to absorb some of the impact from hard collisions.

[0022] Referring now to FIG. 2, the chassis cover plate 46 is removed revealing the three-tag zone support frames 20. FIG. 2 is an example of an additional embodiment with three tag zones rather than the preferred embodiment with one tag zone in the rear bumper. The tag zone support frame 20 is built from plastic, aluminum or rubber. A rubber type material would allow the tag zone slide 32 to be absorbed by the tag zone support frame 20 in the impact zone 64 when it is struck from another vehicle.

[0023] The tag zone support frame 20 is secured to the bottom of the chassis by screws or other fasteners. The tag zone support frame 20 contains the disabling system that cuts the electrical circuits while the vehicle is in play. FIGS. 8 and 9 show that there are six electrical circuits that are powered by a battery pack 52 which runs the engine 42 and the zone lights 58. Each tag zone support frame 20 in FIG. 8 contains a disabling system that opens two circuits and cuts power to the engine 42 and light 58 in those circuits. When all three tag zone disabling systems have been disabled in any random sequence, the current to the engine 42 is shut off and the vehicle remains disabled until manually reactivated.

[0024] FIG. 3 is a view of a closed circuit giving power to the engine 42 and the light 58 in that zone. FIG. 4 is a

view of an open circuit shutting off power to one of the three circuits to the engine 42 and the light 58 in that zone. The snap switches 22 and 24 in FIGS. 3 and 4 are used to open and close the electrical circuits. Snap switch 22 leads to the engine 42. Snap switch 24 leads to the zone lights 58. The embodiment with three tag zones requires a snap switch 24 and a snap switch 22 in each tag zone.

[0025] When looking at FIG. 3 the vehicle is operating since the tag zone slide 32 is allowing the circuit to be closed. In FIG. 4 the tag zone slide 32 has been tagged by another vehicle. When tagged the tag zone slide 32 is pushed back and pushes the snap switches 22 and 24 opening the circuit and cutting power to the engine 42 and light 58. In FIG. 3 you can see the lock hole 34. In FIG. 4, as the tag zone slide 32 is pushed back it is locked into position by the lock pin 26. The lock pin 26 falls into the lock hole 34 locking the tag zone slide 32 into the open circuit position. FIG. 6 is a rear view of FIG. 3. You can see how the lock pin 26 rests on the tag zone slide 32 in the operating mode. FIG. 5 is a rear view of FIG. 4 showing how the lock pin 26 falls into the lock hole 34 as the tag zone slide 32 is pushed back. When the tag zone slide 32 is locked in the open circuit position the tag zone is disabled. The tag zone is disabled until the player manually reactivates the zone by pulling the lock pin 26 out of the lock hole 34.

[0026] When the lock pin 26 is pulled out of the lock hole 34 the tag zone slide 32 is sprung back into position by a spring 62. The spring 62 is located in the slide guide 36. FIGS. 3, 4, and 7 show the location of this spring. FIG. 7 shows a bottom view of the tag zone slide 32. You can see the glide pin 50 extending from under the tag zone slide 32. The glide pin 50 runs inside the slide guide 36 up against the spring 62. FIG. 4 shows the spring 62 being compressed against the glide pin 50. When the lock pin 26 is pulled out of the lock hole 34, the spring 62 pushes the glide pin 50 and tag zone slide 32 back into the original position of FIG. 3, closing the circuit and reactivating the engine 42 and zone light 58.

[0027] The embodiments with multiple tag zones are wired in a way that does not disable the vehicle until all tag zones are tagged and disabled. Referring now to FIGS. 8 and 9, the electrical circuits are shown for the embodiment with three tag zones. Six hot wires are run from the battery pack 52 to each tag zone. Three of the six hot wires are connected to each tag zone snap switch 24. The other three hot wires are connected to each tag zone snap switch 22. From snap switches 24 the hot wires are run to the zone lights 58 in that zone. From snap switches 22 the hot wires are run to the engine 42. The engine 42 has three hot wires powering it. A ground wire is run from the battery pack 52 to the engine 42 and each zone light 58. As the vehicle is operating the engine 42 is powered by the battery pack 52 through 3 electrical circuits. When a tag zone is disabled, one of the three circuits to the engine 42 is opened. The zone light 58 in that zone is shut off. Power to the engine 42 is now limited to only 2 closed circuits. When a second tag zone is randomly disabled the second circuit is now opened. The second zone light is shut off and power to the engine 42 is limited to just one circuit. As the last tag zone is tagged, all three circuits are now opened shutting off power to all three zone lights 58 and the engine 42. The vehicle is now disabled.

[0028] In order to reactivate the vehicle for further play the player must pull back the lock pin 26 in each zone. The tag zone slide resumes the original position closing the circuit allowing further play to begin.

REFERENCE NUMERALS

[0029]	20 Tag zone support frame
[0030]	22 Snap switch for engine power
[0031]	24 Snap switch for light power
[0032]	26 Lock pin
[0033]	30 wire connectors
[0034]	32 Tag zone slide
[0035]	34 Lock hole
[0036]	36 Slide guide
[0037]	38 Wheels
[0038]	40 Steering/suspension
[0039]	44 Front bumper
[0040]	46 Chassis cover
[0041]	50 Glide pin
[0042]	52 Battery pack
[0043]	56 Screws
[0044]	58 Lights
[0045]	60 Ground wire connector
[0046]	62 Spring
[0047]	64 Impact zone

We claim:

1. A device allowing radio controlled vehicles or objects to play the game of tag.

A. The vehicles or objects of claim 1 further including a means for receiving an impact in a tag zone from other said vehicles.

B. The vehicles or objects of claim 1 further including a means of disabling said vehicles or objects when tagged by an opponent.

C. The vehicles or objects of claim 1 further including each said tag zone can be disabled to continue play with fewer tag zones.

D. The vehicles or objects of claim 1 further including a means for a lighting system to indicate which said tag zone has been tagged.

2. A method of said game of claim 1 wherein each said vehicle or object must tag said opponents in all of activated said tag zones.

A. The game of claim 2 further including when each said vehicle is tagged in all said tag zones each said vehicle is disabled.

B. The disabled said vehicle of claim 2-A wherein must be reactivated by said player to enter a new said game.

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