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# (54) REMOTE-ACTING ELECTROSHOCK WEAPON WITH ONE-HANDED EXTRACTION OF FIRING CARTRIDGES

(57) The utility model relates to a non-lethal police and civilian remote-acting electroshock weapon. The technical result consists in the production of a repeating remote-acting electroshock weapon with increased reloading rapidity, in the elimination of the possibility of short-circuiting of the remote-acting electroshock weapon after a first shot and in the possibility of rapidly reloading the remote-acting electroshock weapon with a new cartridge in place of a used one. The remote-acting electroshock weapon with firing cartridges has firing cartridge catches which enable the firing cartridges to be released from the weapon body one-handed by a user holding the weapon in the same hand, spring-loaded firing cartridge extractors and a selector switch for the initiation sequence of the firing cartridges.

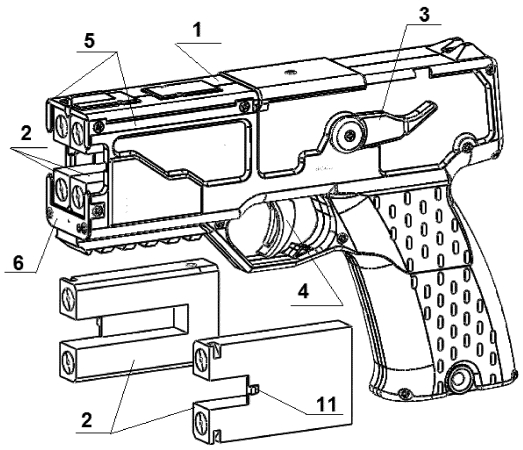


FIG. 1

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## Description

*Field of the utility model*

**[0001]** The utility model relates to multiple-charge remote-acting electroshock weapon (DESHO) with electrical strike system for law enforcement and self-defense of citizens.

*State of the art*

**[0002]** The well-known DESHO TASER X26 [1] of the world's leading company in the field of electroshock weapon "Taser Int." (currently the company "Axon Enterprise, Inc.", USA), which is the most widespread DESHO in the world, was chosen as an analogue. DESHO TASER X26, which is made in the form of a pistol, is designed to temporarily disable biological targets (target, offender, bio-target) with electrical current at a distance or in direct contact with the target. The defeat of the target at a distance is carried out using a firing cartridge that shoots at the target two probes with devices for fixing on the target (needles with barbs), each of which probes is connected by means of an insulated wire (current conducting wire) with the corresponding current conducting electrode of the cartridge. The current conducting electrodes of the cartridge are electrically connected to the contact (combat) electrodes of the DESHO coming out to the front end of the DESHO, to which, when the DESHO is actuated, a high voltage shock electrical current damaging the target is supplied from the high voltage electronic assembly comprised in the weapon. Firing cartridges have a starting charge of a pyrotechnic substance initiated from the high voltage shock electrical current voltage damaging the target supplied to the charge via the contact electrodes of the DESHO being connected to the throwable current conducting wires of the cartridge when the cartridge is loaded into the DESHO. The charge ignites and, by means of a cutting device, depressurizes the container with compressed gas resulting in throwing the probes with the current conducting wires at the target. The cartridge is rigidly attached to the DESHO using a mechanical lock latch located on the cartridge. The defeat of the target at a distance is carried out when the electrical circuit is closed through the body of the bio-target by means of the current conducting wires connecting the contact electrodes of the DESHO to which the high voltage shock electrical current voltage is supplied and the current conducting wires with probes designed to be thrown at the target. The defeat of the bio-target in direct contact mode (contact) is carried out by direct interacting of the contact electrodes of the DESHO with the body of the bio-target without a shot (pressing to the body).

**[0003]** Said DESHO has the following disadvantages. To fire the next shot, for example, in case of target miss or in order to hit another target, the spent cartridge must be disconnected and a new cartridge must be inserted into the DESHO. Fixation of the cartridge in the DESHO with the mechanical lock that can only be opened using both hands of the law enforcement officer (user) requires a few seconds to reload the DESHO with a new cartridge and fire the next shot. To use the DESHO in direct contact with the target, the cartridge must be disconnected first, because when the DESHO is actuated with the cartridge attached, the cartridge is always fired. This is due to the fact that the cartridge is initiated to fire by the high voltage electrical current damaging the target when the potential of this current appears on the contact electrodes of the DESHO. This property is an obstacle to the rapid use of the DESHO with the cartridge loaded into it in situations where the first contact with a target occurs at close range and a shot from an extremely short distance is undesirable, since it can cause serious mechanical injury to the target.

**[0004]** The disadvantage of the analogue also lies in the impossibility of demonstrating the combat discharge to the counterpart without a shot (for the purpose of psychological influence to reduce aggressiveness, before use in direct contact mode or shooting) or use in direct contact mode with the attached cartridge, since appearing the damaging high voltage potential on the combat electrodes of the DESHO, which are always adjoined by the current conducting electrodes of the cartridge, is followed by immediate initiation of the propellant charges of the cartridge with the production of a shot. At the same time, it is well known that when the user threatens to use an electroshock weapon with a demonstration of a damaging electrical spark discharge accompanied by a characteristic noise and spark discharge, the aggressor stops aggressive actions in many cases, realizing that he will have to deal with electricity and, accordingly, subsequent pain. It is also known that aggressive animals (for example, dogs) almost always stop aggression when a person demonstrates electrical discharges. Therefore, the analog of the DESHO can be used by contact (or a demonstration of a combat electrical discharge is made) only with the firing cartridge disconnected from the weapon, which excludes its rapid remote use if necessary.

**[0005]** As the prototype, the newest model DESHO Taser 7 [2] by Axon Enterprise, Inc. company, USA, was chosen, which is made in the form of a pistol consisting of a frame comprising an electronic part having an electronic high voltage unit with an electrical current striking the target and a special pocket (a cavity in the front of the weapon) in which two firing cartridges are located (in the form of a "cartridge couple", see below). The firing cartridges are installed in the frame and held in it by means of a mechanical lock latch_located in the frame of the weapon. The cartridges are in contact with the DESHO contact electrodes. In contrast to the analogue, the firing cartridges have a starting charge of a pyrotechnic substance, which is initiated not by the high voltage electrical current damaging the target, but by a low-voltage electrical current supplied via special starting contacts of the cartridge located at the end of the cartridge

facing the weapon towards the igniter of the charge when the trigger is pulled. When fired, as in the analogue, compressed gas from a depressurized container located in the cartridge throws at the target current conducting wires provided with probes having barbs at the ends that hold them on the target's clothing. Since the cartridge is initiated to fire from a separate low voltage circuit, rather than from the high voltage shock electrical current voltage damaging the target when the potential of this current appears on the contact electrodes of the DESHO, the supply of the high voltage to the current conducting wires of the cartridges does not cause their initiation followed by a shot. Therefore, the prototype of the DESHO, in contrast to its analog, can be used in direct contact mode, without shots, and can demonstrate a damaging electrical spark discharge when firing cartridges are attached to the DESHO. When firing, current conducting wires provided with devices holding them on the target (probes having needles with barbs) are thrown from the firing cartridges at the target. Via the current conducting wires hitting the target, the shock voltage of the high voltage electrical current generated by the high voltage unit is transmitted from the DESHO to the target. The advantage of the prototypes in comparison with the analogue DESHO is the possibility of firing shots at the target with two cartridges one after the other (duplicate shot).

**[0006]** As follows from the multiple and long term practice of the use of multiple-charge DESHO by the US police, the next shot at the target is carried out if the first shot does not hit the target for some reason (missing on the target with one or two current conducting wires, breakage of the current conducting wire, ricochet of the probes from solid objects wearable on clothes, penetration of the probes into thick folds of clothing, etc.).

**[0007]** The disadvantage of the prototype is that the firing cartridges are attached to the weapon with the lock latch and, after the firing, are not automatically separated from the weapon. There may be current conducting wires from the previous shot, which are already stretched towards the target on the line of the next shot, resulting in inevitably changing the trajectory of the probes of the new shot, and they will not hit the target even with correct aiming. The disadvantage of the prototype is also that reloading the weapon requires from the user to remove spent cartridges from the DESHO using both hands to unlock the lock latch. Removing the spent cartridge after firing automatically or using one user's hand holding the weapon is not provided. Therefore, reloading the weapon in the situation when it is necessary to quickly continue firing, the user loses time for removing the spent cartridge using both hands. Given more than 25 years of the widest practice of using DESHO by the US police, it is known that in many cases of stopping an offender's aggression, a law enforcement officer uses a second hand to hold handcuffs, a flashlight or a firearm and therefore simply physically cannot quickly use it to extract a spent cartridge for subsequent reloading with a new one.

**[0008]** Since DESHO according to the proposed utility model is supposed to be produced and used primarily in Russia, it is worth pointing out one more property of the prototype, which is a disadvantage when using such a DESHO in our country. In Russia, there are currently no technologies for the production of analogues of the high voltage current conducting wire DuPont™ Tefzel® ETFE [3] with an electrical insulation strength of 11-16 kV alternating current (for one core) used in the ESHO of the company "Axon Enterprise, Inc." The current conducting wires of all, without exception, models of Russian DESHO used in the Russian Federation are a conventional mounting wire of the type MS, MSE or MGTF with sintered or twisted without sintering winding made of fluoroplastic-4D, which is designed for a rated voltage of 250-500 V alternating current (for a common core of a stranded wire). Therefore, in the case of intersection (contact) of the current conducting wires of the DESHO used by the police and citizens in the Russian Federation, taking into account the high voltage shock electrical current voltage operating in the DESHO, an inevitable electrical breakdown of the current conducting wires insulation occurs in the DESHO and a corresponding short circuit of the current conducting wires with bypassing of the electrical current damaging the target, that is, bypassing of the operation of the high voltage electronic unit striking the target with electrical current by a closed circuit of the current conducting wire of the first shot and termination of the damaging effect of electrical current on the target. In almost all cases, the intersection of the current conducting wires of all models of remote-acting electroshock devices currently used in the Russian Federation occurs literally in 0.5-1 s of exposure. In this case, even if an attempt is made to use a hypothetical multi-charge DESHO (which is currently not in service with the police and citizens in Russia at all), the shock effect on the target after the second shot will not occur. In addition, the crossing of the current conducting wires of the first shot also occurs inevitably if the probes do not hit the target with the subsequent fall of the current conducting wires to the ground. For a second shot at a target unaffected by the first shot with the bypassed current conducting wires, it is necessary to quickly extract the spent cartridge of the first shot with crossed current conducting wires. In the prototype weapon, the extraction of one cartridge after the first shot cannot be performed due to the connection of two cartridges in the form of a "cartridge couple" (see below). But even the extraction of the "cartridge couple" of cartridges can be done only using two hands of the user. Due to the need for the user to use both hands for extraction, the time for firing the second shot increases, and also reloading with a new cartridge instead of spent one is impossible without extracting the second cartridge still non-fired. The impossibility of reloading the DESHO with a new cartridge after the first shot if the second shot is temporarily not needed, arises from the fact that the cartridges are connected to each other in the form of a single "cartridge couple" before loading into the weapon being removed from the prototype by pressing the lock

latch button, which is common for both cartridges. Removing only one spent cartridge is impossible. Removing the cartridges from the frame of the weapon occurs only when gripping both cartridges connected to each other ("cartridge couple") with one hand by the side surfaces, pressing the lock latch button with the other hand and removing the "cartridge couple" with the other hand. Reloading of the "cartridge couple" with a new cartridge instead of the spent one from a pair is possible only when the cartridges are disconnected from each other and a new cartridge is attached to the non-fired cartridge instead of the spent one, that is, the "cartridge couple" is formed again and then it is charged into the pocket (the front hollow cavity for accommodation of the firing cartridges) in the frame of the DESHO.

**[0009]** The proposed utility model makes it possible to eliminate the disadvantages described for the prototype, therefore increasing the efficiency of using the multi-charge DESHO.

*Disclosure of the utility model*

**[0010]** The technical result of the proposed utility model consists in developing multi-charge DESHO with an increased reloading speed, eliminating the possibility of bypassing the DESHO after the first shot, and providing the possibility of quickly reloading the DESHO with a new cartridge instead of spent one with a corresponding increased reliability and efficiency of operation, reliability of the effect.

**[0011]** The desired goal is achieved with remote-acting electroshock weapon comprising a frame, a power source, an electronic circuit that generates a high voltage shock electrical current voltage damaging the target, a trigger element, at least one firing cartridge provided with throwable current conducting wires located in the firing cartridge, an electronic circuit responsible for the sequence of the firing cartridges initiation, at least one mechanical locking mechanism for the firing cartridges driven with a human-powered drive mechanism for unlocking the firing cartridge from the frame of the weapon, which is actuated by the finger of user's hand holding the weapon, and at least one spring extractor of the firing cartridge.

**[0012]** An additional feature of the weapon is that the electronic circuit responsible for the sequence of the firing cartridges initiation has a selector switch for switching the sequence of the firing cartridges initiation.

**[0013]** An additional feature of the weapon is that the locking mechanism has a drive for unlocking the cartridge from a finger lever with a pivot movement.

**[0014]** An additional feature of the weapon is that the locking mechanism has a drive for unlocking the cartridge from a finger slider with a longitudinal movement relative to the frame of the weapon.

**[0015]** An additional feature of the weapon is that the locking mechanism has a drive for unlocking the cartridge from a finger slider with a transverse movement relative to the frame of the weapon.

*The utility model is illustrated by drawings, which show:*

**[0016]**

FIG. 1 and FIG. 2. Appearance of DESHO charged with firing cartridges and the firing cartridges.

FIG. 3. DESHO before shots with half of the frame removed (internal wiring is not shown) with a rotary lever for forced extraction.

FIG. 4. DESHO after the second shot (one firing cartridge is extracted after the shot) with half of the frame removed and cutaway view of the trigger assembly housing.

FIG. 5. DESHO during extraction of the cartridge (with half of the frame removed), the left cartridge is almost extracted from the frame of the weapon.

FIG. 6. Firing cartridge design.

FIG. 7. General view and view with the half of the frame of the DESHO removed, with forced extraction slider with a longitudinal movement.

*Implementation of the utility model*

**[0017]** FIG. 1 and FIG. 2. DESHO consists of a frame 1 assembled from two symmetrical halves, firing cartridges 2 fixed on the frame 1 in the process of loading, in a pocket of the frame. On each side of the frame there are pivoting levers 3 for manual unlocking the firing cartridges 2 from the frame 1.

**[0018]** A trigger 4 is designed to start the DESHO electronic circuit, which generates high voltage pulses of shock electrical current and initiates shots of the firing cartridges 2.

**[0019]** At the front end of the frame 1, there are contact electrodes 5 and 6 (electrically connected together). A removable battery 7 is in the handle of the DESHO; a safety lock 8 and buttons 9 for controlling the modes of operation of the DESHO are at the end of the frame 1, where a display-indicator 10 of the operation of electronic weapon systems can also be located.

**[0020]** FIG. 3. The firing cartridge 2 is fixed on the frame 1 by its protrusion 11 (see also FIG. 1 and FIG. 2) with a movable spring-loaded locking mechanism 12 (located in each half of the frame 1) moving down vertically relative to the frame of the weapon when engaging with a spring-loaded pusher-type drive 13 (which is also located in each half of the frame 1), which in turn engages the carrier 14 (which is also located in each half of the frame 1) connected by means of an axis through the wall of the frame 1 to the lever 3 (which is also located in each half of the frame 1). When the user's finger presses the lever 3 down relative to the frame of the weapon, it turns and rotates the carrier 14 connected thereto, which carrier, when engaging with the recess of the pusher-type drive 13, moves the pusher-type drive 13 forward relative to the frame of the weapon, wherein the drive engages the locking mechanism 12 moving it down relative to the frame of the weapon that results in unlocking the protrusion 11 of

the cartridge 2 from the locking mechanism 12 and the cartridge is pushed out (extracted) from the frame of the weapon by one of the two spring-loaded extractors 15 located in the frame 1 (see FIG. 4), the ejection springs of the extractors are compressed by the cartridge cases when the cartridges are loaded into the pocket designed for accommodation of weapon cartridges. Therefore, when pressing the lever 3 with the finger of only the hand holding the weapon, it is possible to forcibly unload the weapon from the cartridges loaded into it if it is necessary to unload the weapon (for example, for subsequent storage), and also forced extraction of the spent cartridge after the shot is possible if it is necessary to quickly extract the spent cartridges. Therefore, using the other hand of the user to extract the cartridges is not required.

**[0021]** The frame 1 comprises an electronic circuit 16 that generates the high voltage shock electrical current voltage damaging the target, which circuit also includes an electronic circuit responsible for the sequence of the firing cartridges initiation, and the display indicator 10 of the operation of the electronic circuit, battery (and other information related to operation of the weapon), if necessary, and the battery 7 for the power supply of the electronic circuit 16.

**[0022]** FIG. 4. When the trigger 4 is pulled in its final course, it turns on, with its rear protrusion, the clock button 17, the clock button starts the electronic circuit 16 that generates the high voltage shock electrical current damaging the target and supplies the low-voltage electrical current for the initiation of the first cartridge pyrotechnic substance propellant charge (for example, the left cartridge relative to the firing line, when the appropriate sequence of the initiation of the firing cartridges to fire is set (see below)) that throws the current conducting wires at the target. After hitting the target, the user releases the trigger 4, the rear protrusion of which releases the clock button 17, and the operation of the electronic circuit 16 is stopped. To fire the next shot, the user pulls the trigger again and the cycle of switching the electronic circuit on is repeated, but the low-voltage electrical current voltage initiating the propellant charge of the pyrotechnic substance of the cartridge this time is supplied to the second cartridge (for example, the right one), i. e. the switching the electrical current voltage initiating the pyrocharge comes off to the next cartridge.

**[0023]** In the section of the weapon of FIG. 4, where the left cartridge is already extracted from the weapon, one of the extended extractors 15 is shown, which is designed for the extraction of cartridges with its own spring 18 when the user's finger presses the lever 3 for manual unlocking the firing cartridges 2 from the frame 1.

**[0024]** The loading of the DESHO is carried out by inserting the cartridges 2 into the frame pocket located at the front, while the springs of the extractors 18 are compressed, which springs ensure the extraction of the cartridges 2 from the pockets after the shot or when the DESHO is unloaded. When the cartridges are inserted into the pocket, the protrusions 11 of the cartridges press cross bars (upper ends) of the spring loaded locking mechanisms 12 down relative to the frame of the weapon, which cross bars snap onto the protrusions 11 fixing the cartridges in the frame 1 when the cartridges are fully inserted into the pockets.

**[0025]** FIG. 5. The extraction of the spent cartridge (or the unloading of the weapon for subsequent storage) is carried out by pressing the lever 3. In this case, the locking mechanism 12 under the action of the pusher-type drive 13, which is moved forward relative to the frame of the weapon by the carrier 14, is lowered relative to the frame of the weapon, its cross bar (upper protrusion) disengages the protrusion 11 of the cartridge 2, and the cartridge, under the action of the spring 18, which was compressed when loading the cartridge into the weapon, is vigorously pushed out from the pocket of the frame of the weapon by the extractor 15. The mechanism for the extraction of the second cartridge works in a similar way.

**[0026]** Therefore, the device for manual unlocking the cartridges from the frame of the weapon performs both the function of a device that accelerates the extraction during firing (and, accordingly, the speed of reloading the weapon with new ammunition) and the function of a device for unloading the weapon for subsequent storage. The required force when pressing the lever 3 is set by the force of the return springs of the locking mechanism 12 and the pusher-type drive 13.

**[0027]** If it is necessary to demonstrate a spark electrical discharge to an offender to remove aggression from him or to use the weapon in direct contact mode (without shots), the user disconnects the part of the electronic circuit 16, which is responsible for the sequence of the firing cartridges initiation for a shot, from operation using one of the buttons 9. In this case, when the trigger is pulled, the low-voltage electrical current voltage that initiates the firing cartridge pyrotechnic charge is not generated and is not supplied to the electrical contacts 19 (see FIG. 4) for the electrical initiation of the pyrotechnic charge of the cartridges. When the specified part of the electronic circuit is disconnected from operation and the trigger 4 is pulled, the electronic circuit 16 generates only the shock electrical current voltage, with the formation of a visible spark discharge between the electrodes 5 and 6 during the demonstration of the electrical discharge or producing an immobilizing effect on the target when electrodes 5 and 6 contact the body of the bio-target.

**[0028]** Unlike the prototype, in which it is impossible to reload the weapon with a new cartridge instead of spent one between shots, in the proposed weapon, reloading is possible. The electronic circuit 16 responsible for firing cartridges initiation has a selector switch for switching the sequence of the firing cartridges initiation for the first shot from the right cartridge to the left one or vice versa using one of the buttons 9. The possibility to switch the sequence of the firing cartridges initiation makes it possible for a right-handed or left-handed user to extract the spent cartridge and replace it with a new one equally conveniently, and therefore quickly. Switching the se-

quence depending on the user's dominant arm allows the right-handed or left-handed user to set the cartridge initiation position on the weapon, which makes it more convenient (and therefore faster) to reload a weapon having one cartridge fired and extracted with a hand that is closer to the side of the weapon with a pocket from which the cartridge has already been extracted.

**[0029]** FIG. 6. A power case 20 of the cartridge 2, a protrusion 11, a plug 21, split plugs of barrel channels 22, gas channels 23, a pyrotechnic charge 24 with electrical ignition, throwable probes 25 with a current conducting wire. When a low-voltage electrical current voltage is supplied from an electronic circuit 16 to the pyrotechnic charge 24, the charge is initiated and the generated combustion gases pass through the channels 23 into the barrel channels of the cartridge, throwing the probes 25 with the current conducting wire at the target.

**[0030]** FIG. 7. The locking mechanism 12 can be driven both from a pivot lever 3 and from a push slider (or button) with a longitudinal movement relative to the frame of the DESHO, or a push button with a lateral movement relative to the frame of the DESHO. Rotary longitudinal or transverse movement of the member (lever, slider, button) moving the pusher-type drive of the locking mechanism drive 12 relative to the frame of the weapon is determined by the designer. FIG. 7 shows a general view and a view with a half of the frame of the DESHO removed with a slider with a longitudinal movement relative to the frame of the DESHO.

**[0031]** A frame 26 of the DESHO, slider 27 with a longitudinal movement, pusher-type drive 28, locking mechanism 12, cartridge 2.

**[0032]** The operation of the cartridge extraction mechanism does not differ from those given in the description of the previous figures, except that to extract the cartridge, the finger of user's hand holding the weapon presses the slider 27, which is rigidly connected to the pusher-type drive 28 through a slot in the wall of the frame 26, longitudinally relative to the frame 26. The pusher-type drive 28 engages the locking mechanism 12 in the same way as in the above-described figures. In this case, the locking mechanism 12 is disconnected from the protrusion 11 of the cartridge 2, and the extractor pushes the cartridge out of the frame of the weapon with the spring 18, which was compressed when loading the cartridge into the weapon, performing extraction.

**[0033]** It is clear that the force for unlocking the locking mechanism 12 can also be transmitted to it from a lateral movement of the slider or button pressed by the finger of user's hand holding the weapon relative to the frame of the DESHO. Such a transmission is carried out by simple devices that are generally applicable and understandable to anyone, both a technical specialist and a schoolchild, in the form of levers, inclined planes, gear rack and pinion gears or their combinations. In the text of the claims of the invention, the term "finger lever or slider" is used, i. e. member of the drive of the unlocking mechanism driven by the finger of user's hand holding the weapon.

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**[0034]**

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3. Ladyagin Yu.O. "Remote-acting electroshock weapons" Moscow: Stalingrad Foundation Publishing House, 2017, p. 173.

## Claims

1. Remote-acting electroshock weapon comprising a frame, a power source, an electronic circuit that generates a high voltage shock electrical current voltage damaging the target, a trigger element, at least one firing cartridge provided with throwable current conducting wires located in the firing cartridge, an electronic circuit responsible for the sequence of the firing cartridges initiation, wherein the weapon comprises at least one mechanical locking mechanism for the firing cartridges driven with a human-powered drive mechanism for unlocking the firing cartridge from the frame of the weapon, which is actuated by the finger of user's hand holding the weapon, and at least one spring extractor of the firing cartridge.

2. The weapon according to claim 1, wherein the electronic circuit responsible for the sequence of the firing cartridges initiation has a selector switch for switching the sequence of the firing cartridges initiation.

3. The weapon according to claim 1, wherein the locking mechanism has a drive for unlocking the cartridge from a finger lever with a pivot movement.

4. The weapon according to claim 1, wherein the locking mechanism has a drive for unlocking the cartridge from the finger slider with a longitudinal movement relative to the frame of the weapon.

5. The weapon according to claim 1, wherein the locking mechanism has a drive for unlocking the cartridge from the finger slider with a transverse movement relative to the frame of the weapon.

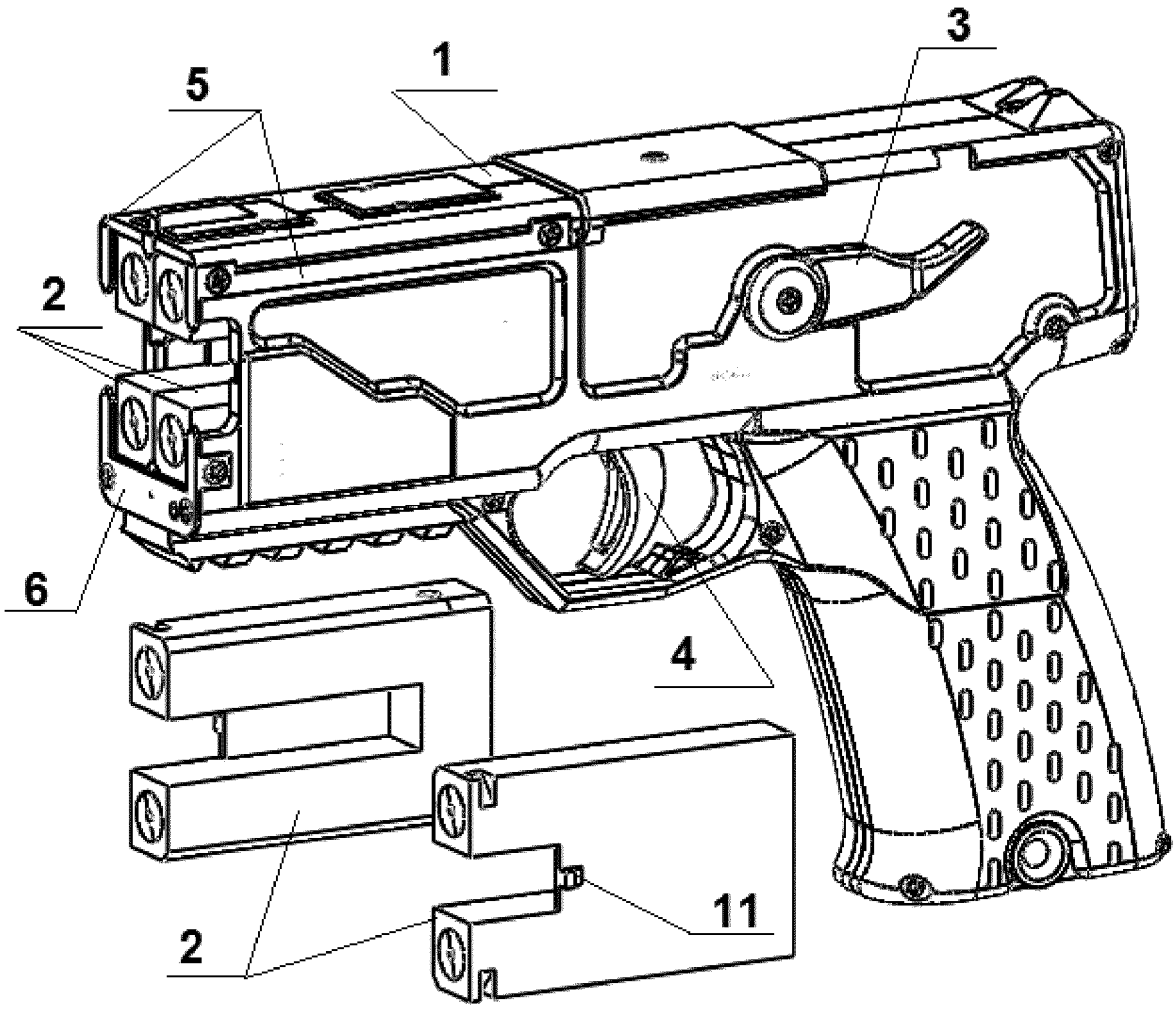


FIG. 1

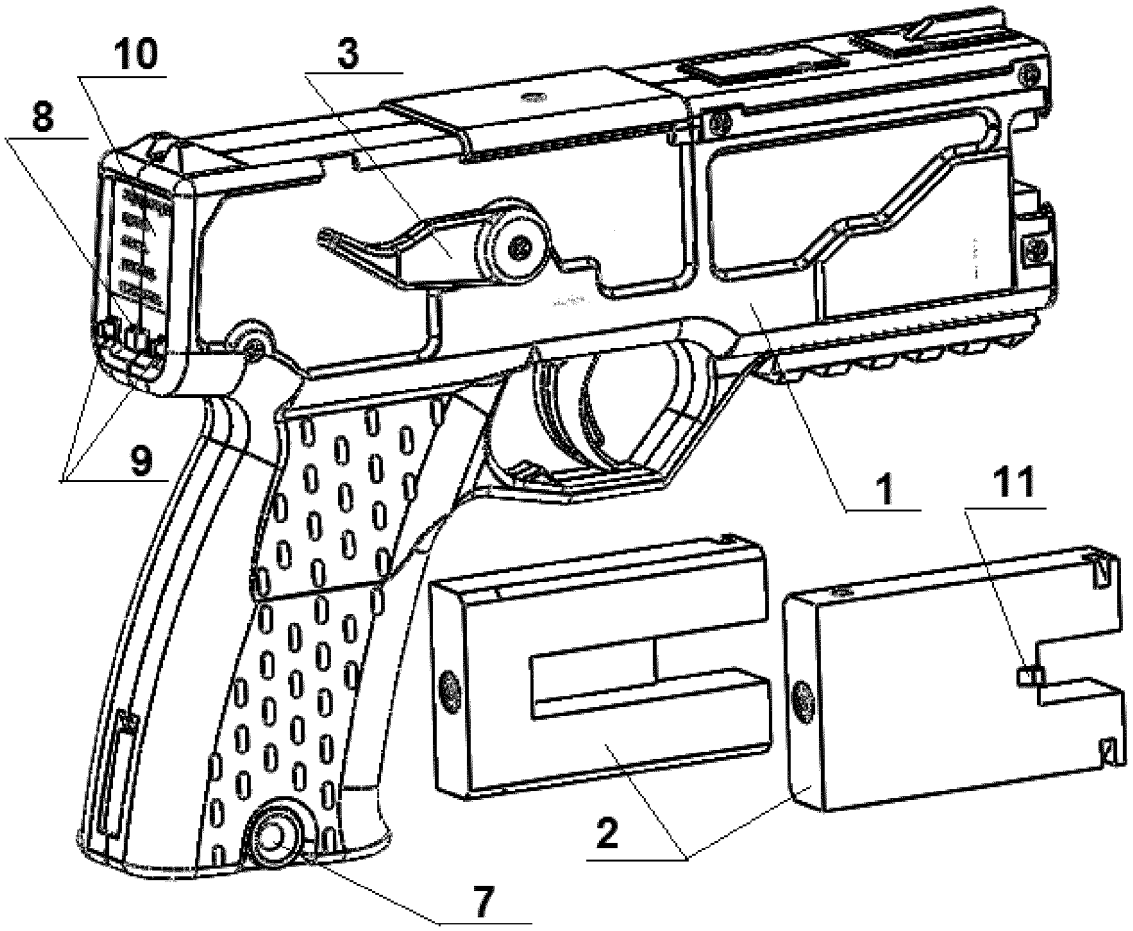


FIG. 2

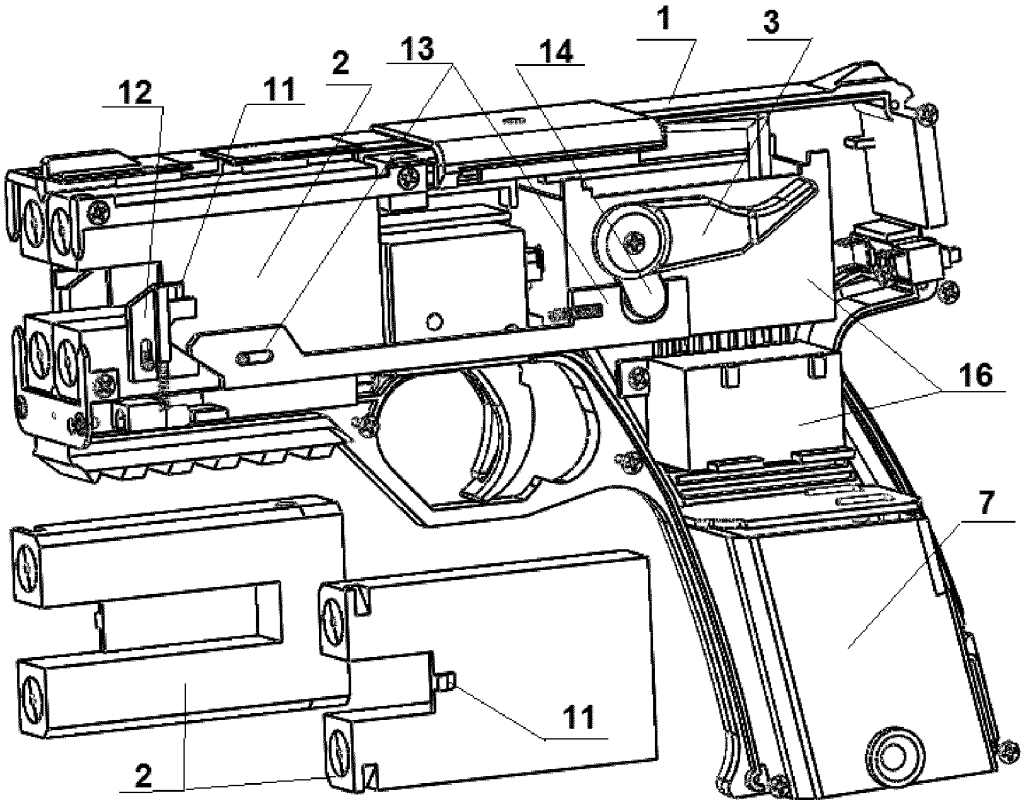


FIG. 3

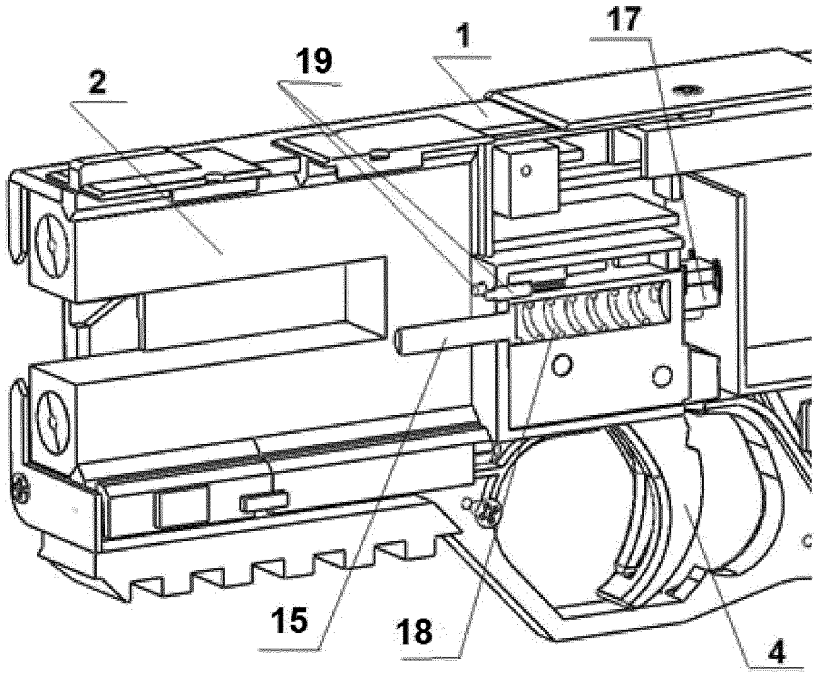


FIG. 4

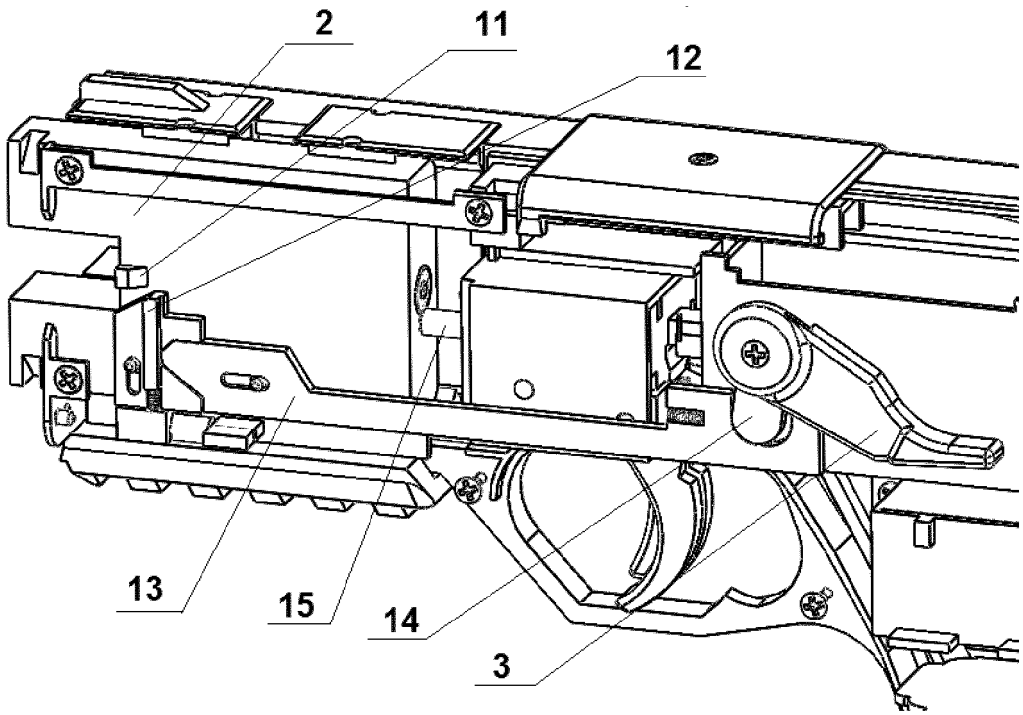


FIG. 5

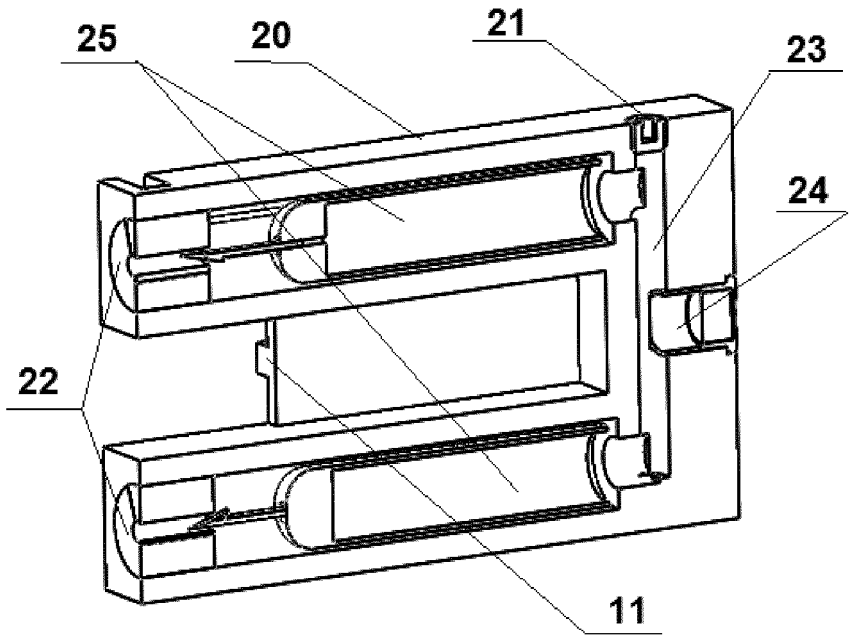


FIG. 6

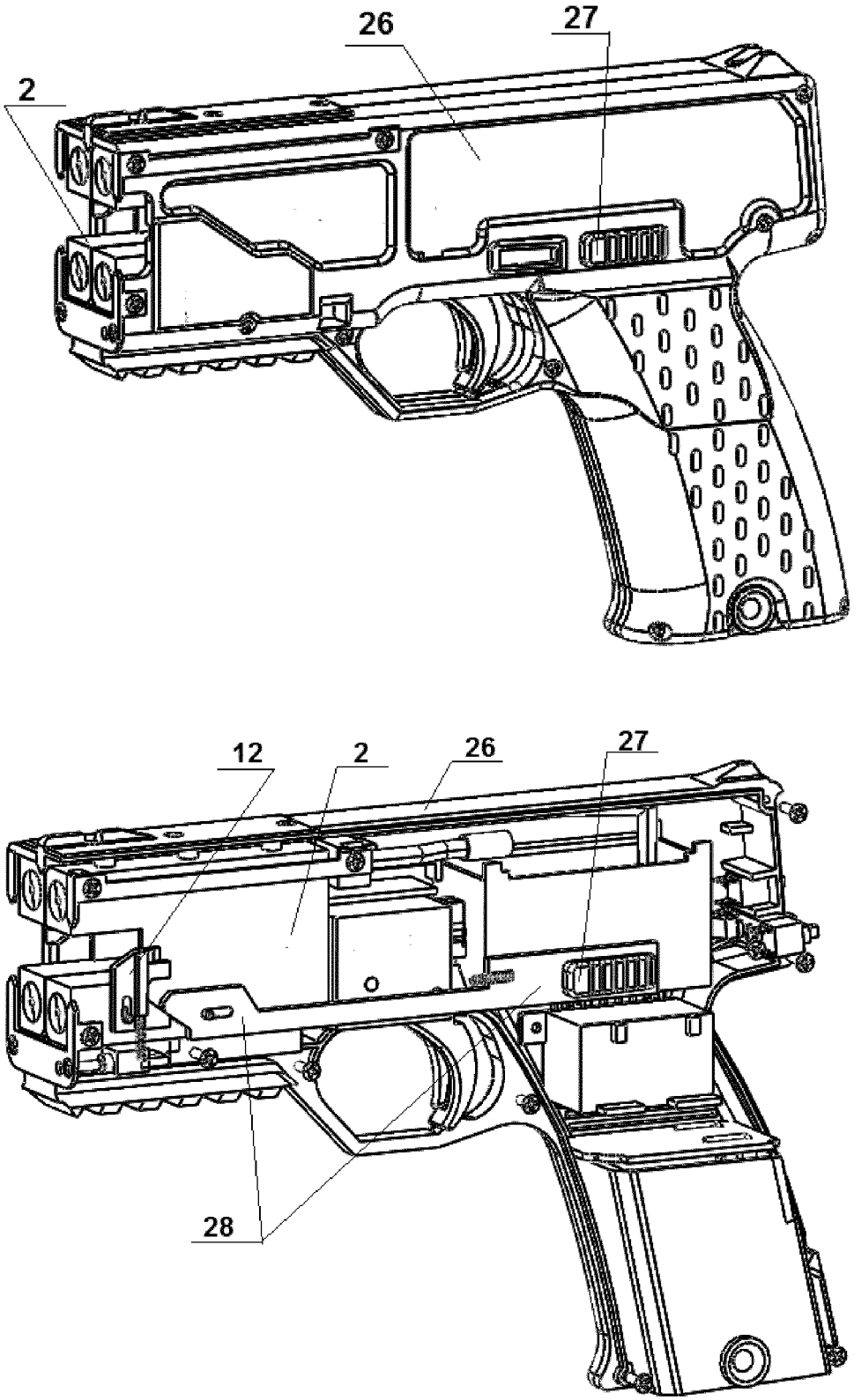


FIG. 7

**INTERNATIONAL SEARCH REPORT**

International application No.
PCT/RU 2020/000523

A. CLASSIFICATION OF SUBJECT MATTER

***F41B 15/04*** *(2006.01)*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

F41B 15/00, 15/04, 9/00, F41H 13/00, F42B 30/14, H05C 1/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatSearch (RUPTO Internal), USPTO, PAJ, Espacenet, Information Retrieval System of FIPS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
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| A | RU 2462678 C1 (B & C WORLD CO. LTD) 27.09.2012, the claims | 1-5 |
| A | RU 2684807 C2 (KLOCHKOV KONSTANTIN DMITRIEVICH et al.) 15.04.2019, claim 18, fig. 3, reference. 3, 17 | 1-5 |
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| A | US 4846044 A1 (LAHR ROY J) 11.07.1989 | 1-5 |

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### Non-patent literature cited in the description


- **LADYAGIN YU.O.** Remote-acting electroshock weapons. Stalingrad Foundation Publishing House, 2017, 173 **[0034]**