



(51) International Patent Classification:
F42B 39/26 (2006.01) *F41A 9/61* (2006.01)

(21) International Application Number:
PCT/IL2020/050525

(22) International Filing Date:
14 May 2020 (14.05.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
16/413,802 16 May 2019 (16.05.2019) US
16/779,746 03 February 2020 (03.02.2020) US

(71) Applicant: **A.C.S (ADVANCED COMBAT SOLUTIONS) LTD** [IL/IL]; 4 Hahagana Street, 6622404 Or Yehuda (IL).

(72) Inventor: **LERNER, Meir Yair**; 36 Harakefet St., 9979700 Karmei Yosef (IL).

(74) Agent: **EREZ, Johnathan**; 3 Shalem St., 5221550 Ramat-Gan (IL).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,

(54) Title: HOLDER FOR WEAPON MAGAZINES

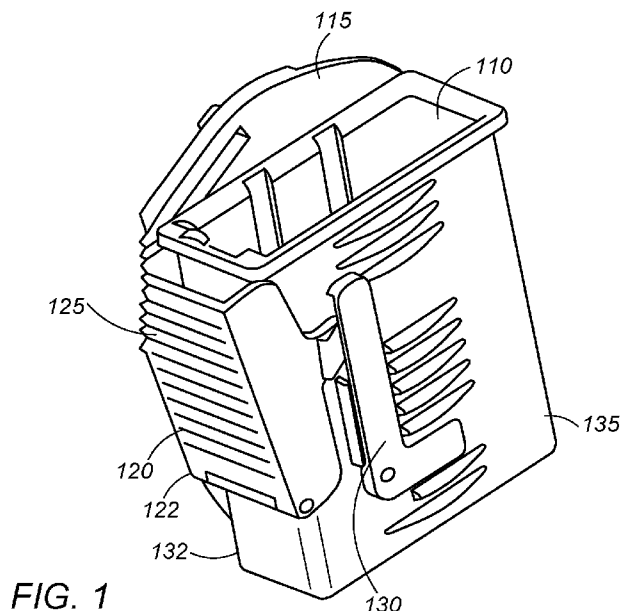


FIG. 1

(57) Abstract: The subject matter discloses a magazine holder, comprising a body, configured to contain the magazine, a handle connected to the body, a lever connected to the body, said lever comprises an external member located outside the body, coupled to the handle and located outside the body and an internal member coupled to the external member and located inside the body, wherein the handle has a first state in which the internal member secures the magazine to the body and a second state in which the internal member enables removal of the magazine from the body.

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

HOLDER FOR WEAPON MAGAZINES

FIELD OF THE INVENTION

The present disclosure generally relates to a holder for weapon magazines.

BACKGROUND OF THE INVENTION

Weapon magazines are used to contain bullets. The magazines are used for guns, rifles and in a variety of bullets' sizes and uses. As the magazine is not an integral part of the weapon, users of the weapons, such as soldiers, policemen and others, may hold the magazine in the garment's pocket or using a holder. The holder may be connected to the users' belt, jacket or other garments.

Commonly used magazine holders may be embedded in the warriors' vests. Such holders may be made of fabric such as cotton or polyester, or made of a rigid material such as metal or plastic. The fabric-based holders do not protect the magazine from physical damages, for example when the users fall down, the magazine can be damaged in a manner that prevents the user from using it. Rigid holders protect the magazine from environmental damages. However, these rigid holders secure the magazine in a manner that disables the user to smoothly remove the magazine when there is a need to immediately insert the magazine into the weapon.

SUMMARY OF THE INVENTION

It is an object of the subject matter to disclose a magazine holder, comprising a body, configured to contain the magazine, a handle connected to the body and a lever connected to the body, said lever comprises an external member located outside the body, coupled to the handle and located outside the body and an internal member coupled to the external member and located inside the body. The handle has a first state in which the internal member secures the magazine to the body and a second state in which the internal member enables removal of the magazine from the body.

In some cases, the magazine holder further comprises a handle spring connected to the handle, the handle spring is configured to retract the handle from the second state to the first state.

In some cases, the handle comprises a pusher extending towards the lever, said pusher is configured to be placed between the external member and the body, thereby moving the external member away from the body.

In some cases, the magazine holder further comprises a connector connected to the body, said connector is configured to connect the magazine holder to another item.

In some cases, the handle moves towards the body when moving from the first state to the second state. In some cases, the internal member and the external member are connected via an aperture in a sidewall of the body.

In some cases, the internal member is placed in a height that matches a hole in the magazine. In some cases, the body comprises a base and sidewalls, wherein the holder further comprises a body spring connected to the body, said spring is tensed when the magazine is inserted into the body and pushes the magazine away from the base when the handle is in the second state.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention may be more clearly understood upon reading of the following detailed description of non-limiting exemplary embodiments thereof, with reference to the following drawings, in which:

FIG. 1 discloses a magazine holder, according to exemplary embodiments of the subject matter;

FIG. 2 discloses a magazine holder with a handle spring configured to retract the handle, according to exemplary embodiments of the subject matter;

FIG. 3 discloses a top view of a magazine holder securing the magazine, according to exemplary embodiments of the subject matter;

FIG. 4 discloses a top view of a magazine holder enabling release of the magazine, according to exemplary embodiments of the subject matter; and,

FIG. 5 discloses a cross section view of a magazine holder having a body spring, according to exemplary embodiments of the subject matter.

The following detailed description of embodiments of the invention refers to the accompanying drawings referred to above. Dimensions of components and features shown in the figures are chosen for convenience or clarity of presentation and are not necessarily shown to scale. Wherever possible, the same reference numbers will be used throughout the drawings and the following description to refer to the same and like parts.

DETAILED DESCRIPTION OF THE INVENTION

Illustrative embodiments of the invention are described below. In the interest of clarity, not all features/components of an actual implementation are necessarily described.

The present invention discloses a rigid magazine holder configured to enable easy removal of the magazine while protecting the magazine from being hit. The magazine holder comprises a body, configured to contain the magazine. The size and shape of the body may be configured to hold the magazine in a firm manner, without the magazine moving inside the body. In some exemplary embodiments, at least a portion of the body is made of rigid material. The magazine holder may be configured to be secured to a user's vest or other garment, such as a belt. The magazine holder comprises a connector coupled to the body, said connector is physically connected to the garment or vest. The connector may be stitched or connected to the vest or garment using adhesive material, bolts, hooks and loops or any other securing or connecting mechanism desired by a person skilled in the art.

The magazine holder also comprises a handle configured to remove the magazine from the body. The handle has a first state, in which the magazine is secured to the body, and a second state, in which the magazine can be removed from the body. When a user of the magazine holder presses the handle, the user enables removal of the magazine from the holder's body. In some exemplary cases, the magazine holder also comprises a body spring configured to push the magazine away from the body, when or after the handle is in the second state. This way, the magazine is smoothly, quickly and easily removed from the magazine holder. The user can remove the magazine using a single hand,

FIG. 1 discloses a magazine holder, according to exemplary embodiments of the subject matter. The magazine holder comprises a body, configured to contain the magazine. The body comprises sidewalls 132 and a base. The upper side of the sidewalls 132 ends with lips 110 via which the magazine is inserted into the body. The body has an inner volume defined between the sidewalls. The size and shape of the inner volume enable the user to easily insert the magazine, without the magazine moving inside the inner volume. In some cases, the body comprises only sidewalls 132, configured to hold the magazine inside the body. In some exemplary embodiments, the body comprises the sidewalls 132 and the base is assembled by a spring connected to the bottom section of the sidewalls 132, preventing the magazine from falling downwards. The body may be made of plastics, polymers, metal and a combination thereof.

The magazine holder also comprises a handle 120 coupled to the body. The holder may be pressed by the user towards the body using a single hand, for example as the fingers grasp the body and the user's wrist pushes the handle 120 towards the body. In some exemplary cases, the handle 120 is physically connected to two sidewalls in a bottom portion 122 of the handle 120, enable the upper portion 125 of the handle 120 to move when the user presses the handle 120.

The magazine holder also comprises a lever 130. The lever 130 is secured to a lever sidewall 135 of the body. In some exemplary cases, the body has four (4) sidewalls, and the lever 130 is secured to a lever sidewall 135 which is located next to the sidewall 132 to which the handle 120 is located. The lever 130 has an external member located outside the body and an internal member located inside the body. The external member located and the internal member are connected to each other. In some exemplary cases, the external member and the internal member are connected via an aperture in the lever sidewall 135. The external member and the internal member can be connected to each other in additional manner, as desired by a person skilled in the art. The internal member of the lever 130 may be placed in the inner volume of the body, in a height and depth that fit a hole in the magazine's body.

When the user of the magazine holder presses the handle 120 towards the sidewall 132, the lever 130 moves away from the lever sidewall, thereby enabling removal of the magazine from the body. The lever 130 may be secured to a lever spring (not shown) configured to retract the lever to the first state after the magazine is removed from the holder.

The magazine holder also comprises a connector 115 configured to connect the magazine holder to another item. The connector 115 is physically coupled to the body, for example using screws secured to one of the sidewalls, as elaborated below. The connector 115 may comprise arms or another mechanism configured to grasp the item to which the magazine holder is secured. The other item may be a vest or garment.

FIG. 2 discloses a magazine holder with a handle spring configured to retract the handle, according to exemplary embodiments of the subject matter. The handle comprises a rear side 210 and one or more lateral sides 220. In the embodiment shown in figure 2, the handle has two lateral sides secured to two sidewalls. The lateral side 220 extends forward from the rear side 210, and is secured to lateral sidewall 240. The lateral sidewall 240 has a protrusion member 225 extending outwards from an external surface of the lateral sidewall 240. Front upper portion of the

lateral side 220 has a niche 222 that limit the movement of the lateral side 220 around the protrusion member 225.

In some exemplary cases, the lateral side 220 of the handle is coupled to a retracting mechanism, such as a handle spring 230. The handle spring 230 may be physically secured to the lateral sidewall 240, or to another part of the holder's body. The handle spring 230 may comprise two arms connected via a hinge, first arm 232 is secured to the lateral sidewall and second arm 234 secured to the lateral side 220. When the user moves the lateral side 220 towards the body, the second arm 234 moves towards the first arm 232 and the handle spring 230 is tensed. When the user releases the handle, the handle spring 230 retracts the handle away from the body. The lateral sidewall 240 also shows connector protrusions 242, 243 configured to secure the connector to the holder's body, via the lateral sidewall 240.

The bottom portion 228 of the lateral side 220 is secured to the body of the magazine holder, for example via a rotating axis 216. The rotating axis 216 enables rotational movement of the handle relative to the holder's body. The rotational movement may be limited by the side of the niche 222 secured to the protrusion member 225.

FIG. 3 discloses a top view of a magazine holder securing the magazine, according to exemplary embodiments of the subject matter. The top view shows a top surface of the handle 310. The handle extends forward towards the lever. The forward side of the handle is a pusher 315 configured to push the lever in a manner that releases the magazine. In some exemplary cases, the pusher 315 pushes the external member 330 of the lever away from the lever sidewall 325. In figure 3, the handle 310 is in the first state, and the magazine is secured to the body using an internal member 335 of the lever. In some exemplary cases, the internal member 335 is placed in a height that matches a niche of the magazine. The internal member 335 is configured to secure the magazine to the inner volume of the holder's body. In some other cases, the internal member 335 may be placed above the magazine, towards the lips of the sidewalls, thus preventing the magazine from being released upwards. When the lever is in the first state, the internal member 335 may protrude at about 3-7 millimeters from the internal surface 328 of the lever sidewall 325. When the lever is in the second state, the internal member 335 may protrude at about 0-2 millimeters from the internal surface 328 of the lever sidewall 325, enabling removal of the magazine.

The top view of the magazine holder also shows a base 320 of the holder. The base 320 is secured to all the sidewalls. In some exemplary cases, the holder has sidewalls and lacks the base 320. The inner volume of the body, defined between the four sidewalls, matches the shape and size of the magazine, thereby preventing the magazine from moving inside the body when secured therein.

The top view also shows a connector 340 configured to enable connecting the magazine holder to another item, such as a vest 345. The connector 340 may be secured to the sidewall via screws, adhesive material or using another mechanism. The connector 340 may comprise one or more arms 342 configured to secure the connector 340 to the vest 345.

FIG. 4 discloses a top view of a magazine holder enabling release of the magazine, according to exemplary embodiments of the subject matter. The holder's body comprises a base 440 and sidewalls 402, 404 and 406. The rear side 460 of the handle is close to the handle sidewall 404, and the front sides 410 of the handle are secured to the sidewalls 402 and 406. The front side 410 of the handle comprises a pusher 415 which is a front end of the front side, engaging with the external member 430 of the lever. When the handle is in the first state, the external member 430 is distanced from the external surface of the sidewall 402 in a manner that enables the pusher 415 to be inserted between the external surface of the sidewall 402 and the external member 430. When the user presses the handle, the pusher moves forward, moving the external member farther from the sidewall 402. As the external member 430 is statically secured to the internal member 435 of the lever, the internal member 435 also moves outwards from the inner volume of the body when the user presses the handle, enabling removal of the magazine. The internal member 435 may partially remain inside the inner volume of the body, for example at about 0.5-2 millimeters, in a manner that enables smooth removal of the magazine. Pin 438 protrudes into the inner volume of the body after the magazine is removed therefrom.

FIG. 5 discloses a cross section view of a magazine holder having a body spring, according to exemplary embodiments of the subject matter. The magazine holder comprises a handle 520 and a body 510 comprises sidewalls and a base 545. The holder comprises a body spring 540 configured to push the magazine upwards, towards the body lips, when at least a portion of the internal member is moved outside of the holder's body. The base 545 and the sidewalls form a niche 548 configured to secure the body spring 540 inside the body, also when there is no magazine in the magazine holder. The niche 548 may be formed when the base 545 has a smaller area than

the upward lips of the body. This way, a step 542 is formed upwards from the base 545. Niche bottom 544 extends laterally from the step 542 towards the sidewalls 535. Niche top 502 is also secured to the sidewalls 535, forming the niche 548 in which the body spring 540 is tensed. When the body spring 540 extends, a bottom side of the body spring 540 remains in the niche 548. Connecting members 552 and 554 are configured to protrude into the inner side of the body 510, securing the connector to the body 510.

While the disclosure has been described with reference to exemplary embodiments, it will be understood by those skilled in the art that various changes may be made and equivalents may be substituted for elements thereof without departing from the scope of the invention. In addition, many modifications may be made to adapt a particular situation or material to the teachings without departing from the essential scope thereof. Therefore, it is intended that the disclosed subject matter not be limited to the particular embodiment disclosed as the best mode contemplated for carrying out this invention, but only by the claims that follow.

Claims:

1. A magazine holder, comprising:
 - a body, configured to contain the magazine, said body comprising sidewalls and a base;
 - a lever connected to a lever sidewall of the body, said lever comprises an external member located outside the body and an internal member coupled to the external member and located inside the body;
 - a handle connected to the body, said handle is located outside the body;
 - wherein the handle has a first state in which the internal member secures the magazine to the body and a second state in which the external member moves away from the lever sidewall, thereby enabling removal of the magazine from the body;
 - a pusher extending from the handle towards the external member of the lever; said pusher is placed between the external member and an external surface of the lever sidewall, wherein the pusher is in physical contact with the external member of the lever when the handle is in the first state and in the second state;
 - wherein upon movement of the handle from the first state to the second state, the pusher moves the external member of the lever farther from the lever sidewall.
2. The magazine holder according to claim 1, further comprises a handle spring connected to the handle, the handle spring is tensed when the handle is in the second state, wherein the handle spring is configured to retract the handle from the second state to the first state.
3. The magazine holder according to claim 1, further comprises a connector connected to the body, said connector is configured to connect the magazine holder to another item.
4. The magazine holder according to claim 1, wherein the handle moves towards the body when moving from the first state to the second state.
5. The magazine holder according to claim 1, wherein the internal member and the external member are connected via an aperture in the lever sidewall.
6. The magazine holder according to claim 1, wherein the internal member is placed in a height that matches a hole in the magazine.
7. The magazine holder according to claim 1, further comprises a body spring connected to the body, said body spring is tensed when the magazine is inserted into the body and pushes the magazine away from the base when the handle is in the second state.

8. The magazine holder according to claim 1, wherein the handle comprises a rear side and one or more lateral sides, said one or more lateral sides extend forward from the rear side and are secured to lateral sidewall of the body.
9. The magazine holder according to claim 8, wherein the lateral sidewall has a protrusion member extending outwards from an external surface of the lateral sidewall, wherein a front upper portion of the lateral side has a niche that limits a movement of the lateral side around the protrusion member when the handle moves from the first state to the second state.
10. The magazine holder according to claim 8, wherein the lateral sidewall has a bottom portion, said bottom portion is secured to the body of the magazine holder, via a rotating axis, said rotating axis enables rotational movement of the handle relative to the body.

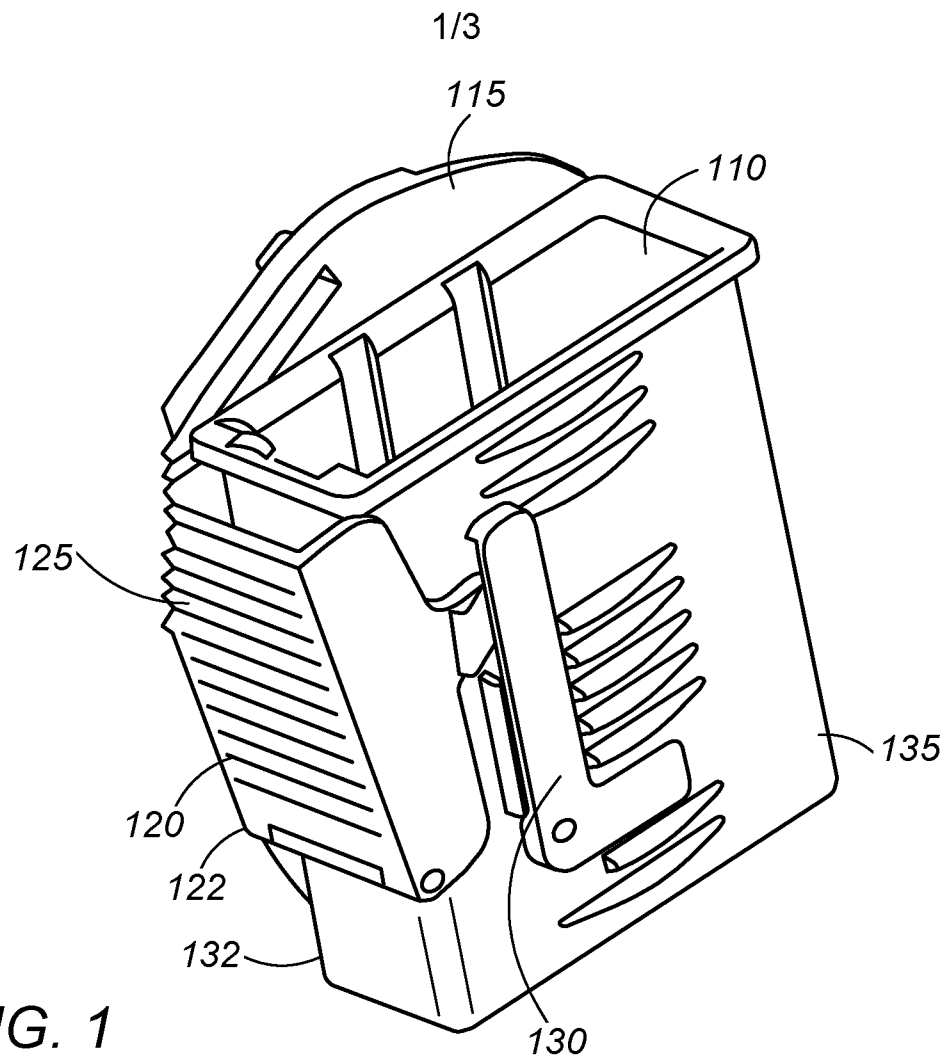


FIG. 1

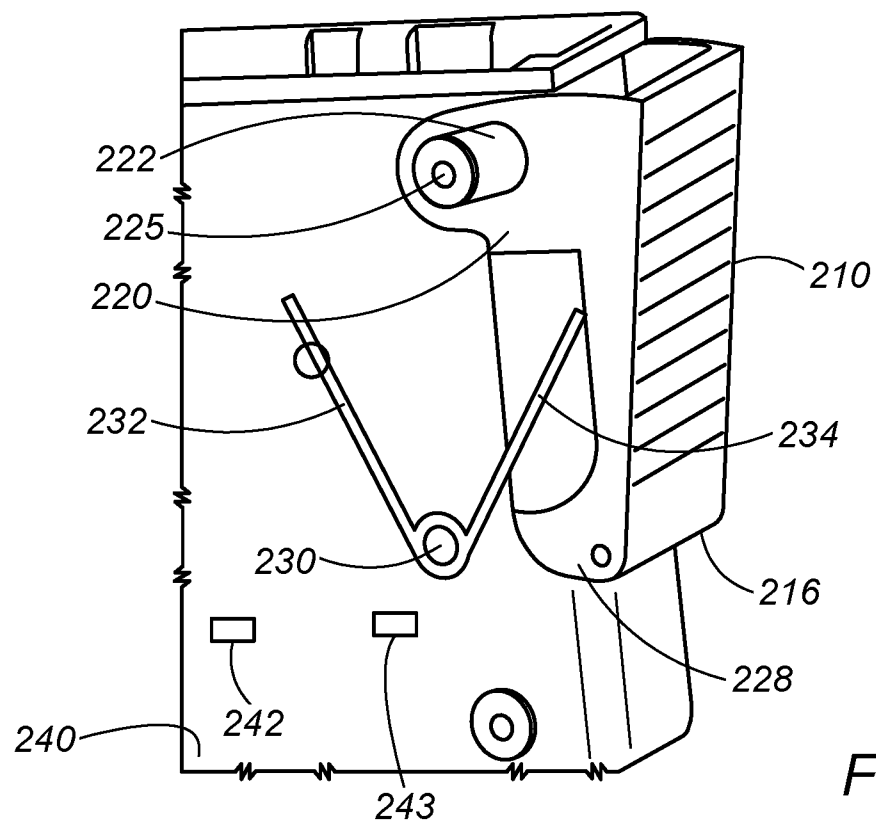


FIG. 2

2/3

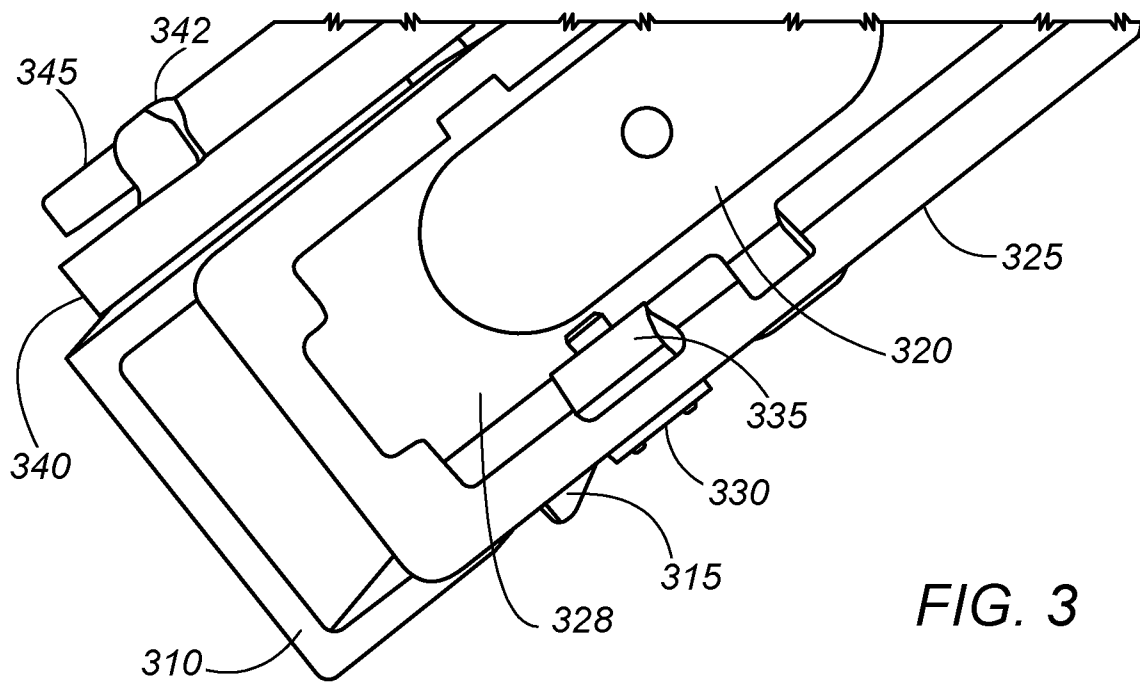
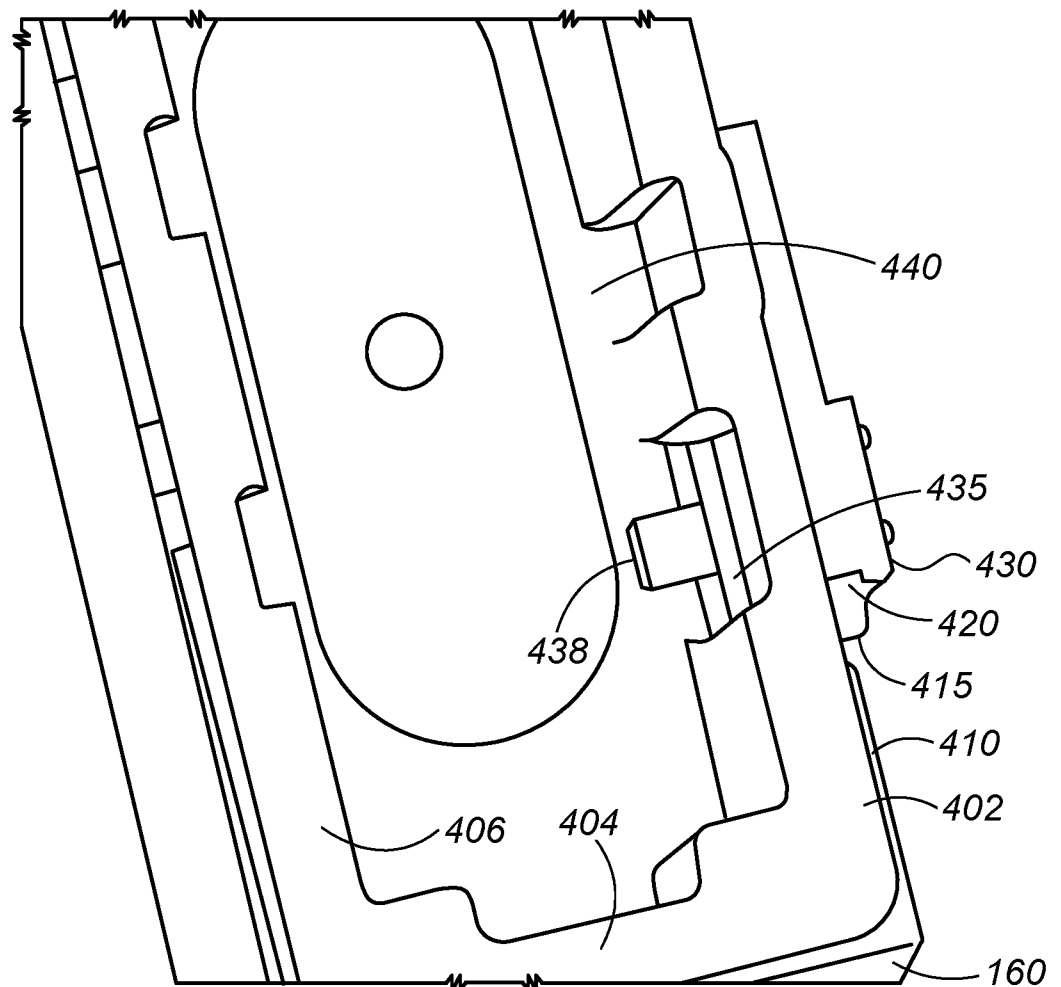


FIG. 4



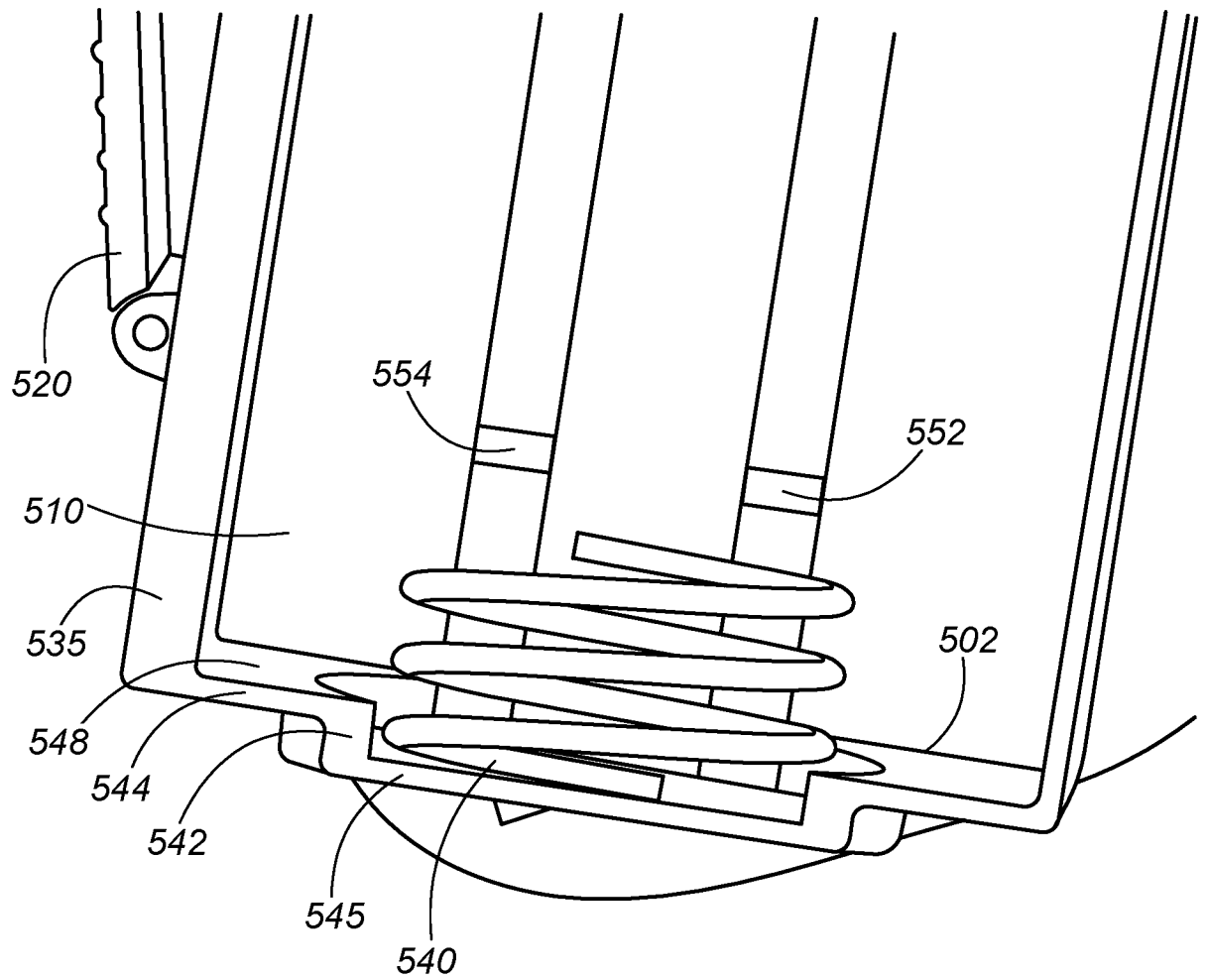


FIG. 5

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL2020/050525

A. CLASSIFICATION OF SUBJECT MATTER IPC (20200101) F42B 39/26, F41A 9/61 CPC (20160501) F42B 39/26, F41A 9/61 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) IPC (20200101) F42B 39/26, F41A 9/63 CPC (20160501) F42B 39/26, F41A 9/63 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) Databases consulted: Derwent Innovation, Orbit Search terms used: magazine, carrier, press, release		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7562482 B1 JOHNSON DAVID A [US] 21 Jul 2009 (2009/07/21) Entire Document	1-6
Y	Entire Document	7
A	Entire Document	8-10
Y	US 5174482 A SAFARILAND LTD INC [US] 29 Dec 1992 (1992/12/29) Entire Document	7
A	Entire Document	1-6,8-10
A	US 2013248566 A1 ALLIANT TECHSYSTEMS INC?[US] 26 Sep 2013 (2013/09/26) Entire Document	1-10
☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "D" document cited by the applicant in the international application "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 25 Jun 2020		Date of mailing of the international search report 25 Jun 2020
Name and mailing address of the ISA: Israel Patent Office Technology Park, Bldg.5, Malcha, Jerusalem, 9695101, Israel Email address: pctoffice@justice.gov.il		Authorized officer CHOVER Nimrod Israel Telephone No. 972-73-3927181

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/IL2020/050525

Patent document cited search report			Publication date	Patent family member(s)			Publication Date
US	7562482	B1	21 Jul 2009	US	7562482	B1	21 Jul 2009
US	5174482	A	29 Dec 1992	US	5174482	A	29 Dec 1992
US	2013248566	A1	26 Sep 2013	US	2013248566	A1	26 Sep 2013
				US	8887972	B2	18 Nov 2014
				AU	2012345631	A1	10 Jul 2014
				AU	2012345631	B2	04 Feb 2016
				CA	2859726	A1	06 Jun 2013
				EP	2786090	A1	08 Oct 2014
				EP	2786090	A4	15 Jul 2015
				WO	2013082544	A1	06 Jun 2013