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(54) **Eye-catching zipper head**

(57) An eye-catching zipper head includes a light-and-sound actuating unit (20) fixed at the backside of a zipper head or at the backside of a pull member. The light-and-sound actuating unit is composed of a light emitter (21) or a speaker or both a light emitter and a speaker, a battery (23) for supplying the light-and-sound actuating unit with electric power and a changeover switch (24). The light emitter is actuated to emit light to be transmitted out through the front side of the transparent zipper head or the front side of the transparent pull member and the sound emitter is actuated to give out sounds, original in design able to attract people's attention.

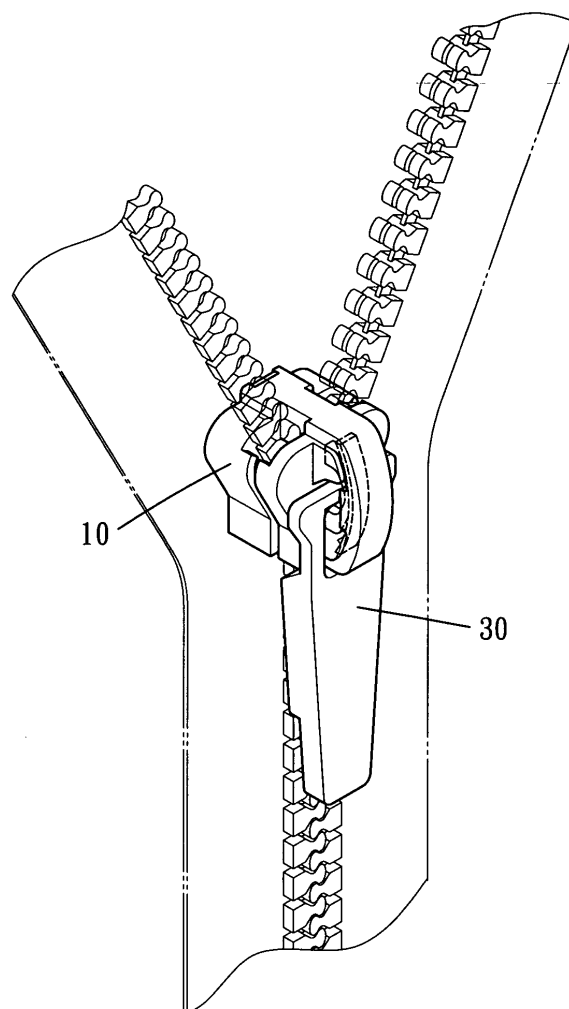


FIG. 2

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Description

1. Field of the Invention

[0001] This invention relates to an eye-catching zipper head, particularly to one able to give out light or sounds or give out both light and sound at the same time, original in design and refreshing to the eye for attracting people's attention.

2. Description of the Prior Art

[0002] A conventional zipper is simply employed for fastening, insipid and monotonous in appearance and unable to attract those teenagers who pursuit fashion of novelty and variability.

[0003] The objective of the invention is to offer an eye-catching zipper head able to give out light or sounds or give out both light and sounds at the same time.

[0004] The eye-catching zipper head in the present invention includes a light-and-sound actuating unit fixed on the backside of a zipper head or on the backside of a zipper pull member. The light-and-sound actuating unit is composed of a light emitter or a speaker or both a light emitter and a speaker, a battery and a changeover switch. When the light-and-sound actuating unit is actuated to function, the light emitter will emit light to be transmitted out through the front side of the transparent zipper head or the front side of the transparent zipper pull member, or/and the speaker will give out sounds, novel in design and able to attract people's attention.

[0005] This invention will be better understood by referring to the accompanying drawings, wherein:

Fig. 1 is a front view of a first preferred embodiment of an eye-catching zipper head in the present invention:

Fig. 2 is a perspective view of the first preferred embodiment of the eye-catching zipper head in the present invention.

Fig. 3 is an exploded perspective view of the first preferred embodiment of the eye-catching zipper head in the present invention:

Fig. 4 is a side cross-sectional view of the first preferred embodiment of the eye-catching zipper head in the present invention:

Fig. 5 is a side cross-sectional view of the first preferred embodiment of the eye-catching zipper head in a using condition in the present invention:

Fig. 6 is an exploded perspective view of a second preferred embodiment of an eye-catching zipper head in the present invention:

Fig. 7 is a side cross-sectional view of the second preferred embodiment of the eye-catching zipper head in a using condition in the present invention:

Fig. 8 is an exploded perspective view of a third preferred embodiment of an eye-catching zipper head in the present invention:

Fig. 9 is an exploded perspective view of a fourth preferred embodiment of an eye-catching zipper head in the present invention:

Fig. 10 is an exploded perspective view of a fifth preferred embodiment of an eye-catching zipper head in the present invention:

Fig. 11 is an exploded perspective view of a sixth preferred embodiment of an eye-catching zipper head in the present invention: and

Fig. 12 is an exploded perspective view of a seventh preferred embodiment of an eye-catching zipper head in the present invention.

[0006] A first preferred embodiment of an eye-catching zipper head in the present invention, as shown in Figs. 1, 2 and 3, includes a zipper head 10, a light-and-sound actuating unit 20 and a zipper pull member 30 combined together.

[0007] The zipper head 10 is light penetrable, having its backside bored with a fitting groove 11, as shown in Fig. 3 and a protective cover 12 is fixed on the fitting groove 11.

[0008] The light-and-sound actuating unit 20 fixed in the fitting groove 11 of the zipper head 10 and secured on an electronic board 22 is composed of a light emitter 21 (such as an LED), a battery 23 for supplying the light emitter 21 with electric power and a change-over switch 24 for controlling electric connection and disconnection between the light emitter 21 and the battery 23, with the outer end of the change-over switch 24 extending out of the protective cover 12 to be pressed and controlled by a user.

[0009] After the above-mentioned components are orderly combined together, as shown in Figs. 2 and 4, an eye-catching zipper head can be used as follows. When the change-over switch 24 is turned to "ON", the battery 23 and the light emitter 21 are electrically connected and the light emitter 21 will emit light to be transmitted out through the front side of the light-penetrable zipper head 10, as shown in Fig. 5. The color of light emitted out by the light emitter 21 can be optionally changed in accordance with matching articles and the light emitted by the light emitter 21 can be set in a continuous or on-and-off shining condition.

[0010] A second preferred embodiment of an eye-catching zipper head in the present invention, as shown in Figs. 6 and 7, is to have the light-and-sound actuating unit 20 combined with the pull member 30 of the zipper head 10. The pull member 30 has its backside bored with a fitting groove 31, as shown in Fig. 6, and a protective cover 32 is covered on the fitting groove 31. The light-and-sound actuating unit 20 fitted in the fitting groove 31 and secured on the electronic board 22 is composed of a light emitter 21, a battery 23 and a change-over switch 24, which all face the outer surface of the pull member 30. When the light-and-sound actuating unit 20 of the pull member 30 is started to act, the light emitted by the light emitter 21 will be transmitted out through the front side

of the transparent pull member 30, making the entire front side of the pull member 30 shine brilliantly, as shown in Fig. 7. Specifically, when the changeover switch 24 is controlled to make electric connection, the entire pull member 30 will shine dazzlingly. Thus, if the zipper of this invention is applied to clothes and when people wearing such clothes walk or ride on a bike or a motorbike in the night, the light transmitted out through the pull member 30 has a function of warning for safety. By so designing, the zipper of the invention may have hearty attraction for teenagers.

[0011] In addition, the combination of the protective cover 12, 32 with the fitting groove 11, 31 can be made waterproofed. Thus, when clothes are to be washed, the protective cover 12, 32 is unnecessary to be removed from the fitting groove 11, 31.

[0012] A third preferred embodiment of an eye-catching zipper in the present invention, as shown in Fig. 8, includes a light-penetrable zipper head 10 having its back side bored with a fitting groove 11 having a protective cover 12 covered thereon. A light-and-sound actuating unit 20 fitted in the fitting groove 11 and secured on an electronic board 22 consists of a speaker 25, a battery 23 for supplying the speaker 25 with electric power and a change-over switch 24 for making electric connection or disconnection between the sound emitter 25 and the battery 23, with the end of the change-over switch 24 extending out of the protective cover 12 to be pressed and controlled by a user. After foresaid components are combined together and when the changeover switch 24 is controlled to make the battery 23 and the sound emitter 25 electrically connected, the sound emitter 25 will give out sounds or music.

[0013] A fourth preferred embodiment of an eye-catching zipper in the present invention, as shown in Fig. 9, is to have the light-and-sound actuating unit 20 with the speaker 25 fixed in the fitting groove 31 in the back side of the pull member 30.

[0014] A fifth and a six preferred embodiment of an eye-catching zipper in the present invention, as shown in Figs. 10 and 11, are to have a light-and-sound actuating unit 20 with a light emitter 21 and a light-and-sound actuating unit 20 with a speaker 25 respectively assembled with the zipper head 10 and the pull member 30 to enable the zipper head 10 to give out both light and sounds at the same time.

[0015] A seventh preferred embodiment of an eye-catching zipper in the present invention, as shown in Fig. 12, is to have the pull member 30 and the zipper head 10 combined together by mutual engagement so that the pull member 30 having the actuating unit 20 provided thereon can be easily disengaged from the zipper head 10 when clothes with the zipper are to be washed, or easily engaged with the zipper head 10 again after a user puts on such clothes.

[0016] To sum up, the eye-catching zipper head 10 or zipper pull member 30 of this invention has the following advantages.

1. It is original in design and refreshing to the eye.
2. It has a function of warning for safety when a user employs such zipper and walks or rides on a bike or a motorbike in the night.

[0017] While the preferred embodiments of the invention have been described above, it will be recognized and understood that various modifications may be made therein and the appended claims are intended to cover all such modifications that may fall within the spirit and scope of the invention.

Claims

1. An eye-catching zipper head comprising a light-and-sound actuating unit, said light-and-sound actuating unit fixed at the back side of a zipper head, said light-and-sound actuating unit composed of a light emitter, a battery and a change-over switch, said light emitter actuated to emit light, said light emitted by said light emitter transmitted out through the front side of light-penetrable said zipper head, letting the front side of said zipper head shine brilliantly.
2. An eye-catching zipper head comprising a light-and-sound actuating unit, said light-and-sound actuating unit fixed at the back side of the pull member of said zipper head, said light-and-sound actuating unit composed of a light emitter, a battery and a change-over switch, said light emitter actuated to emit light, said light emitted by said light emitter transmitted out through the front side of light-penetrable said pull member of said zipper head, letting the front side of said pull member of said zipper head shine dazzlingly.
3. An eye-catching zipper head comprising a light-and-sound actuating unit, said light-and-sound actuating unit fixed at the back side of said zipper head, said light-and-sound actuating unit composed of a speaker, a battery and a change-over switch, said change-over switch controlled to make electric connection to actuate said sound emitter to give out sounds.
4. An eye-catching zipper head comprising a light-and-sound actuating unit, said light-and-sound actuating unit fixed at the back side of the pull member of said zipper head, said light-and-sound actuating unit composed of a speaker, a battery and a change-over switch, said change-over switch controlled to make electric connection to actuate said sound emitter to give out sounds.
5. The eye-catching zipper head as claimed in Claim 1 or 2, wherein said zipper head or said pull member has the back side bored with a fitting groove for fixing said light-and-sound actuating unit therein and said

fitting groove is covered thereon with a protective cover, said light-and-sound actuating unit secured on the inner side of said protective cover.

6. The eye-catching zipper head as claimed in Claim 1 or 2, wherein said light-and-sound actuating unit is additionally installed with a speaker. 5
7. The eye-catching zipper head as claimed in Claim 2 or 4, wherein said pull member and said zipper head are combined together by mutual engagement. 10

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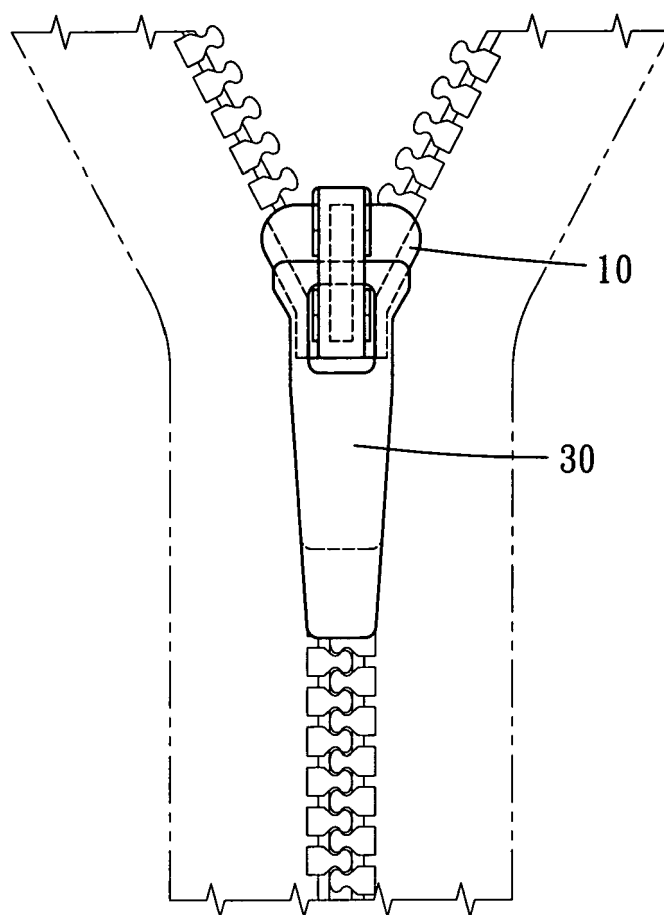


FIG. 1

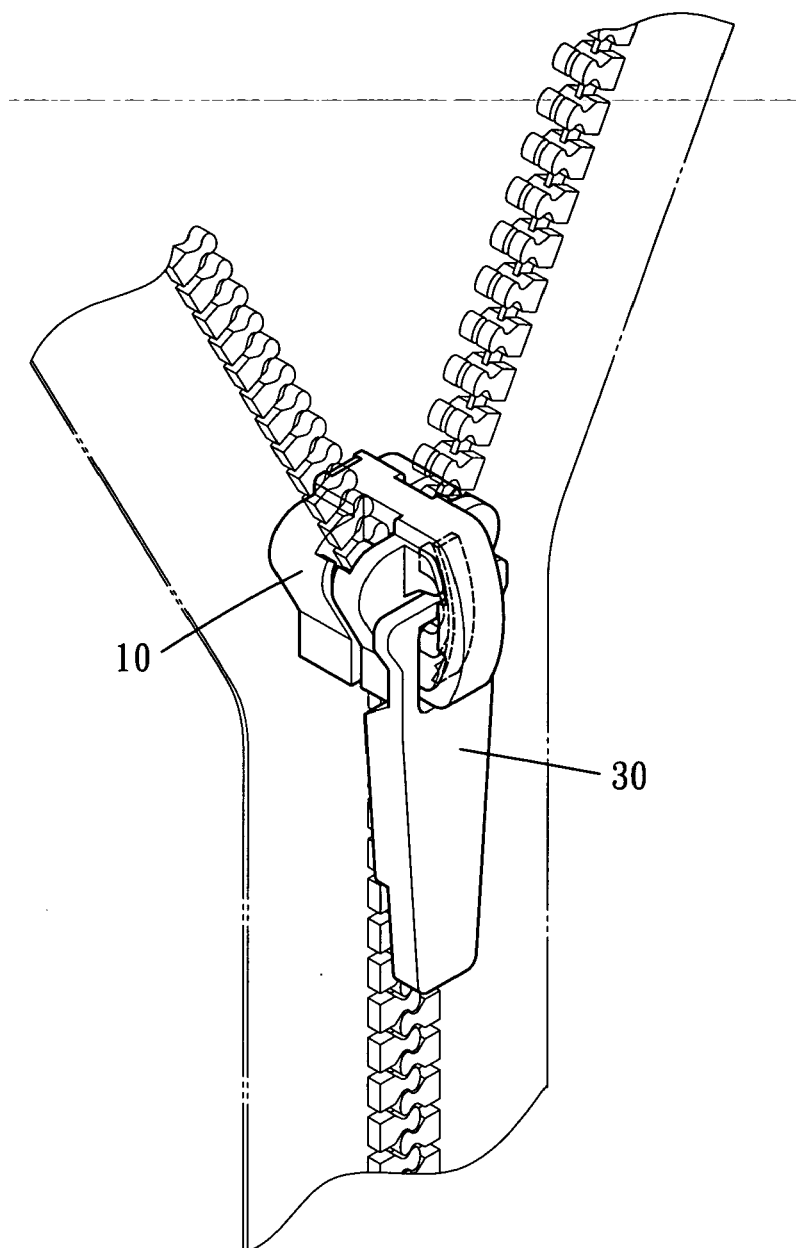


FIG. 2

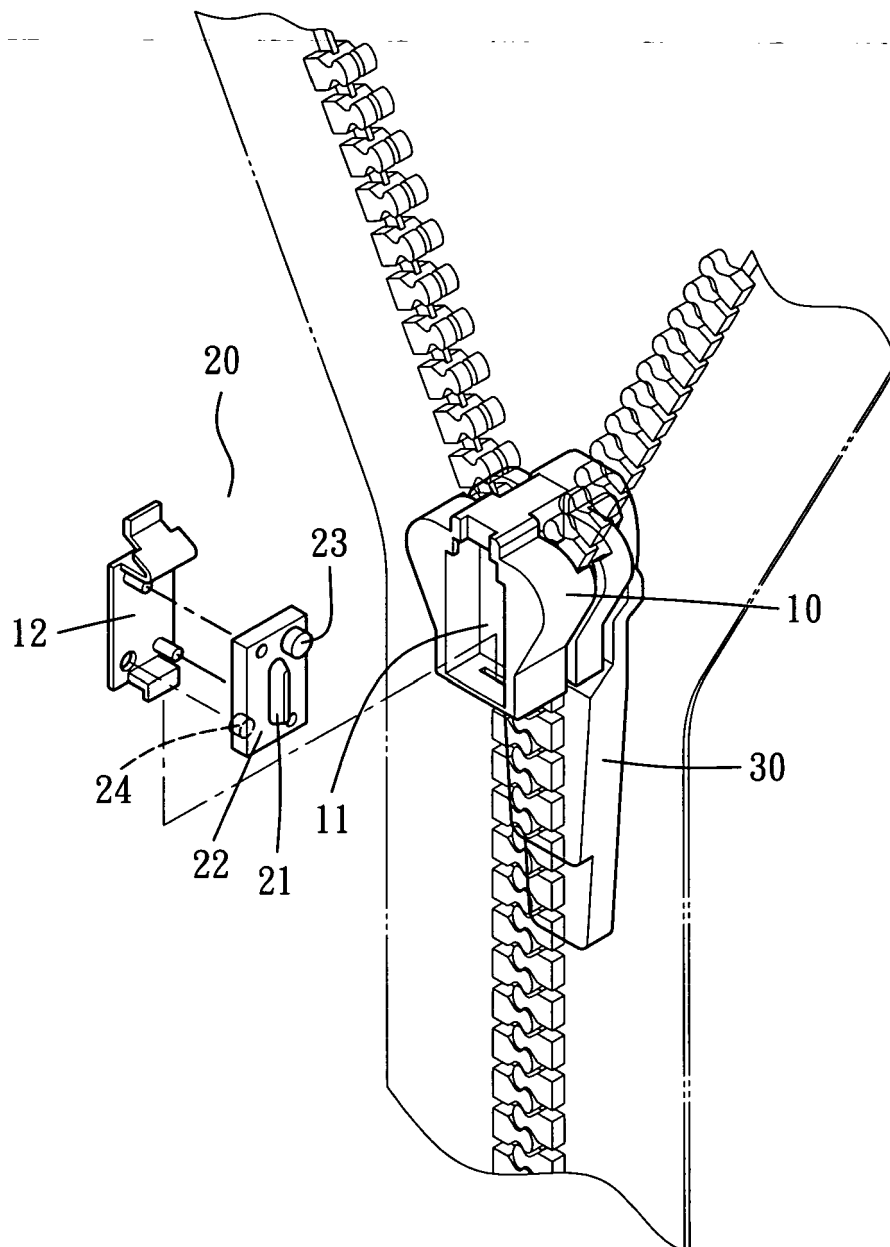


FIG. 3

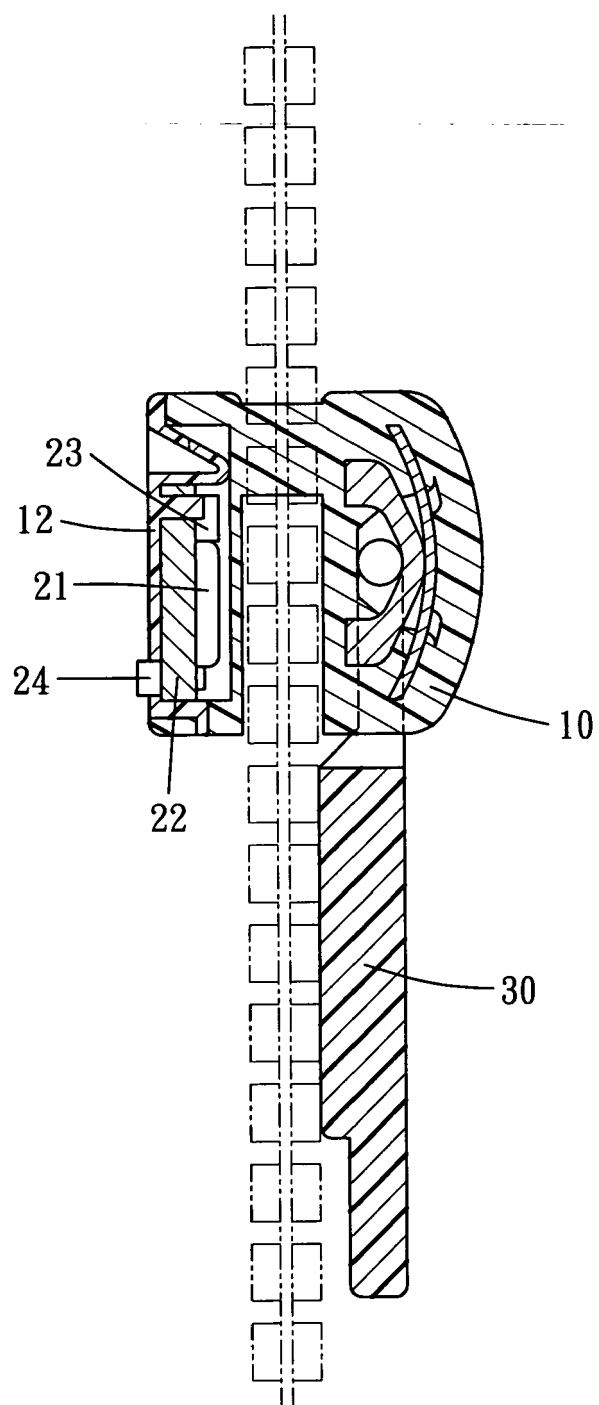


FIG. 4

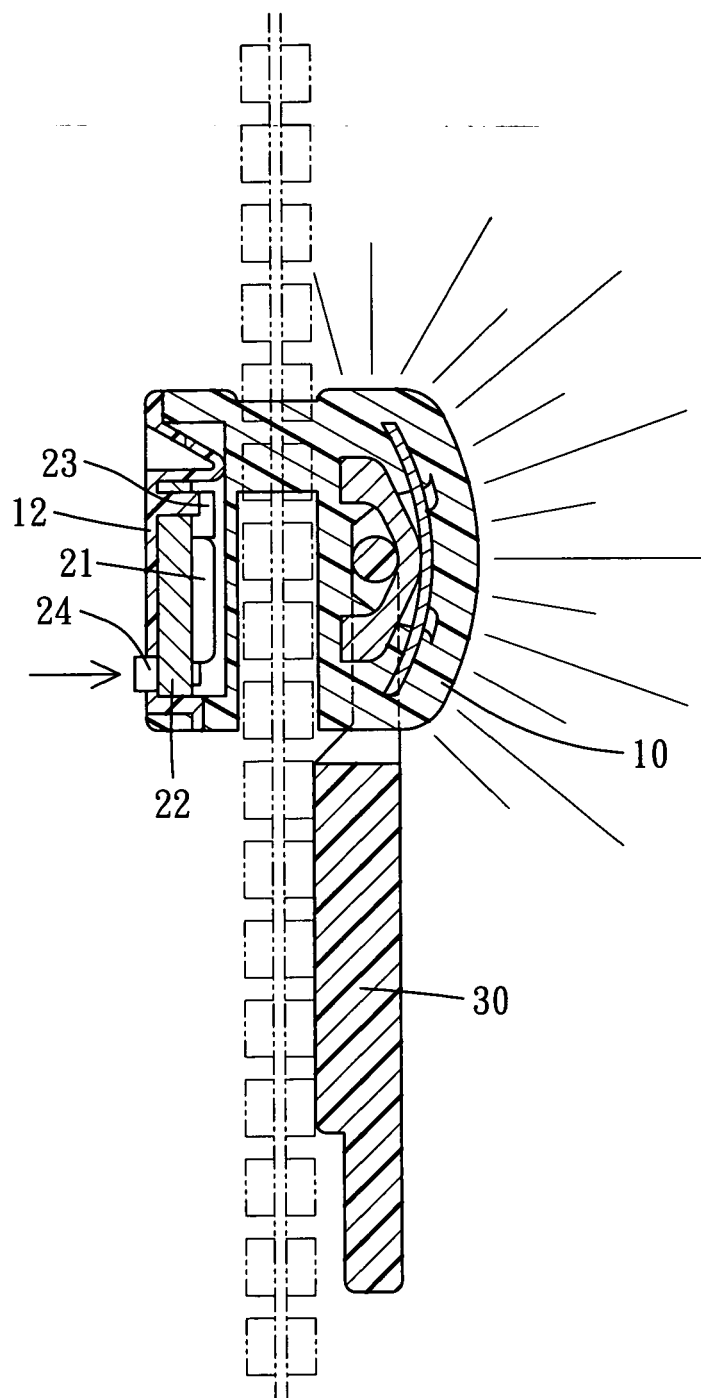


FIG. 5

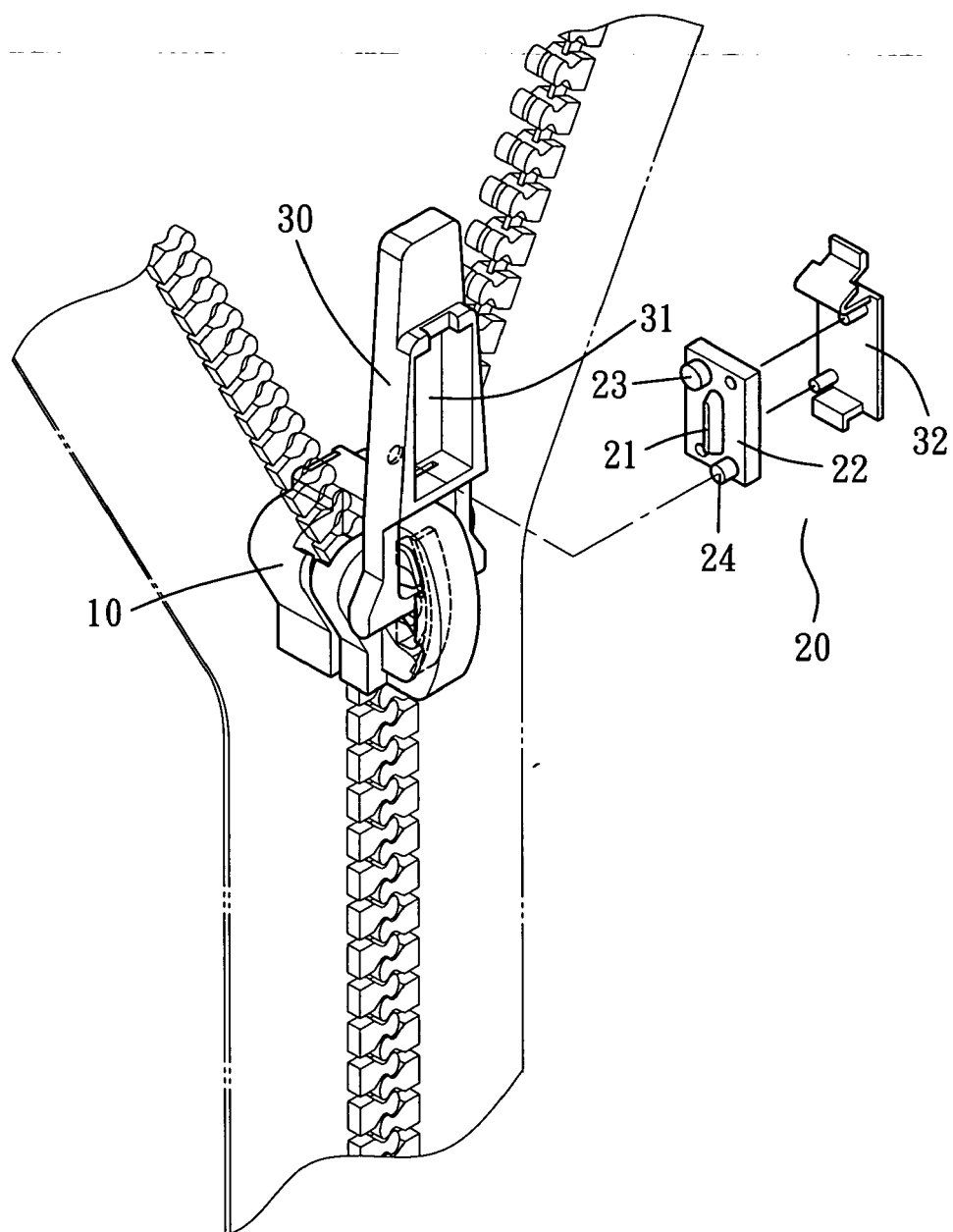


FIG. 6

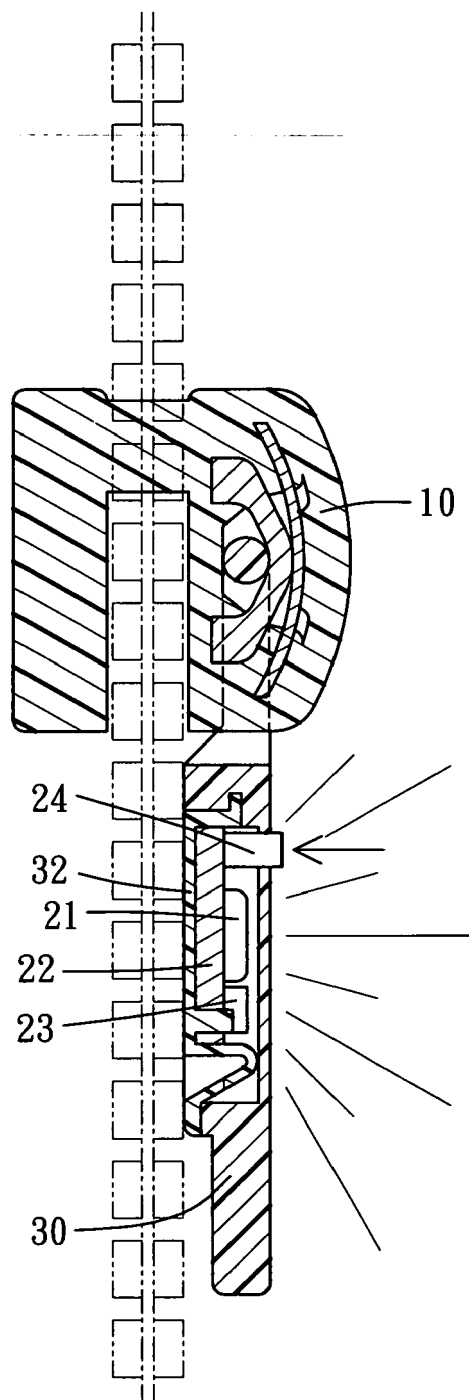


FIG. 7

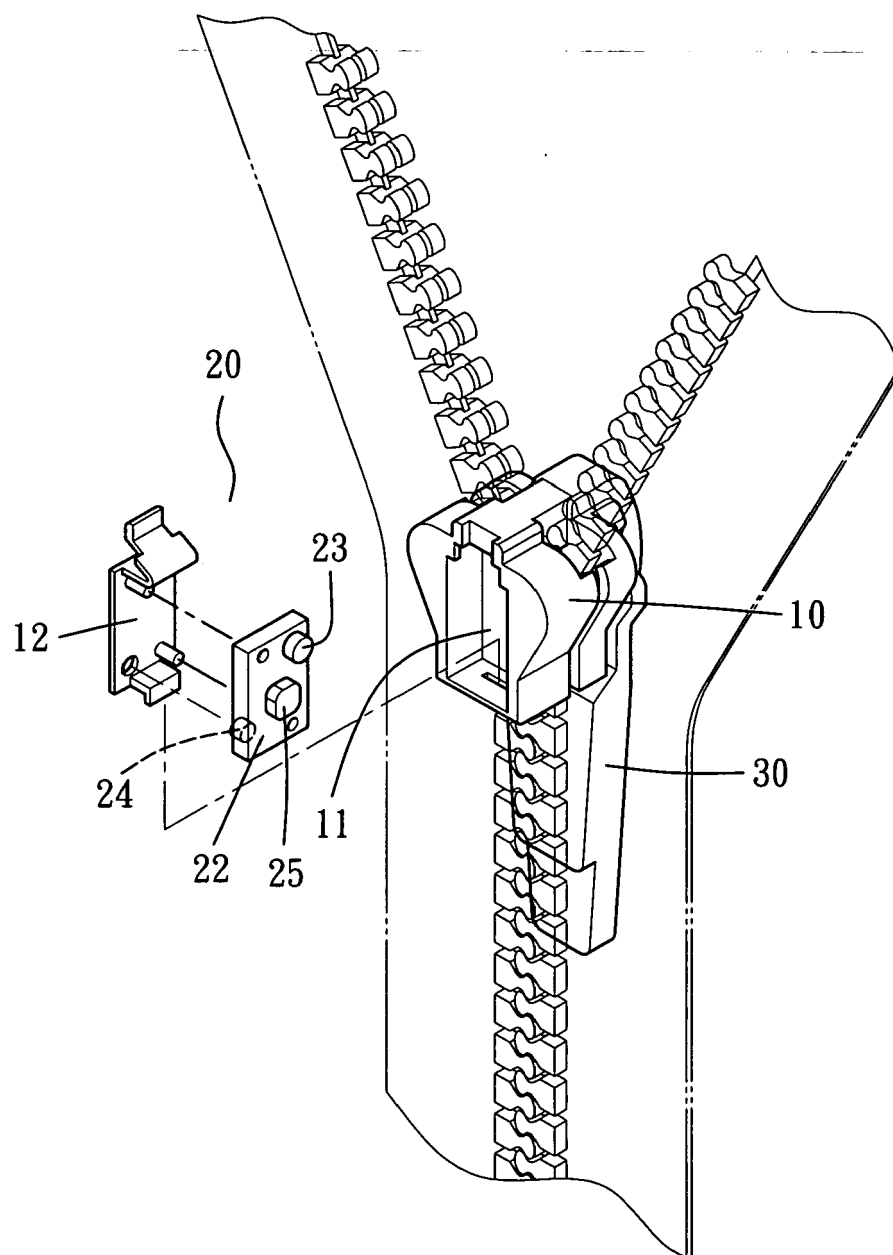


FIG. 8

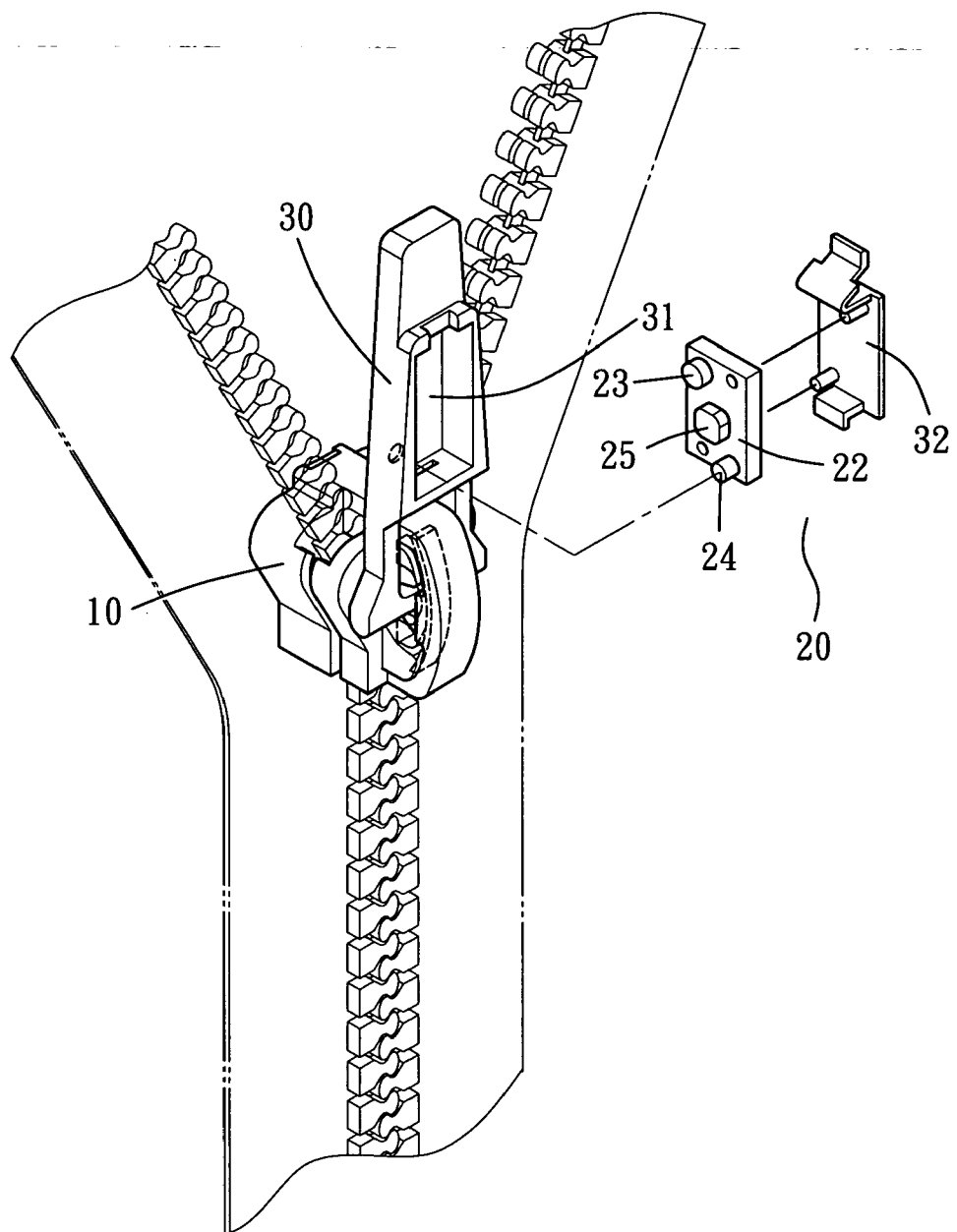


FIG. 9

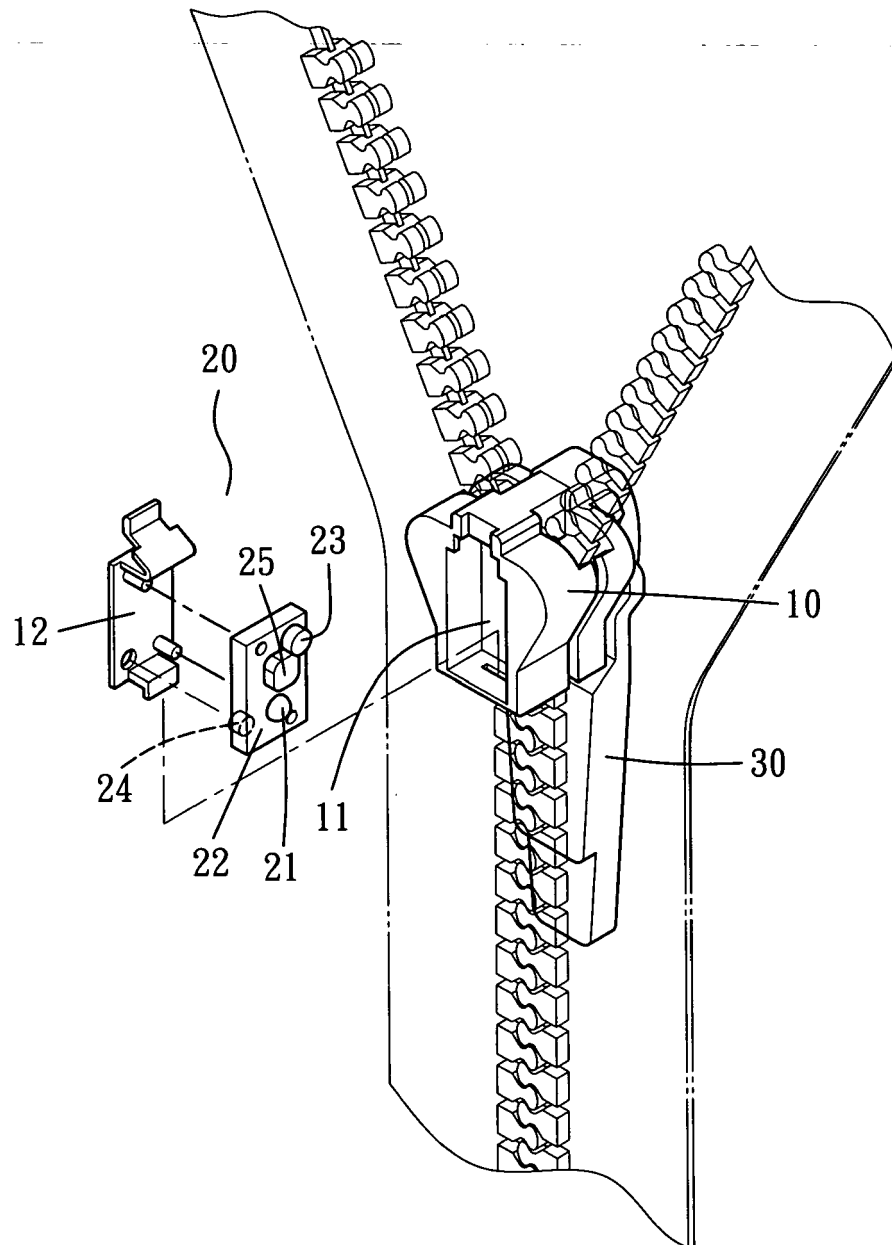


FIG. 10

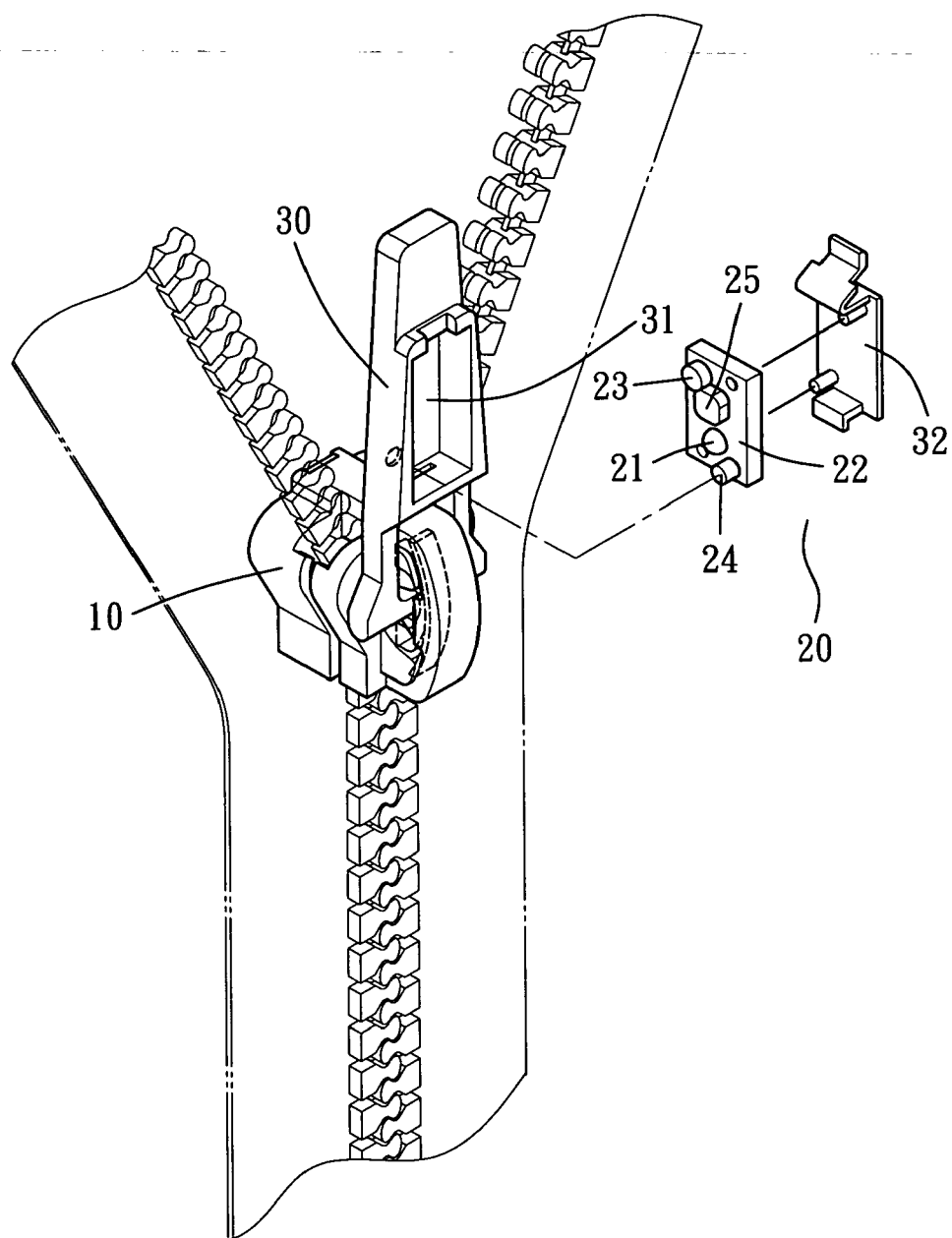


FIG. 11

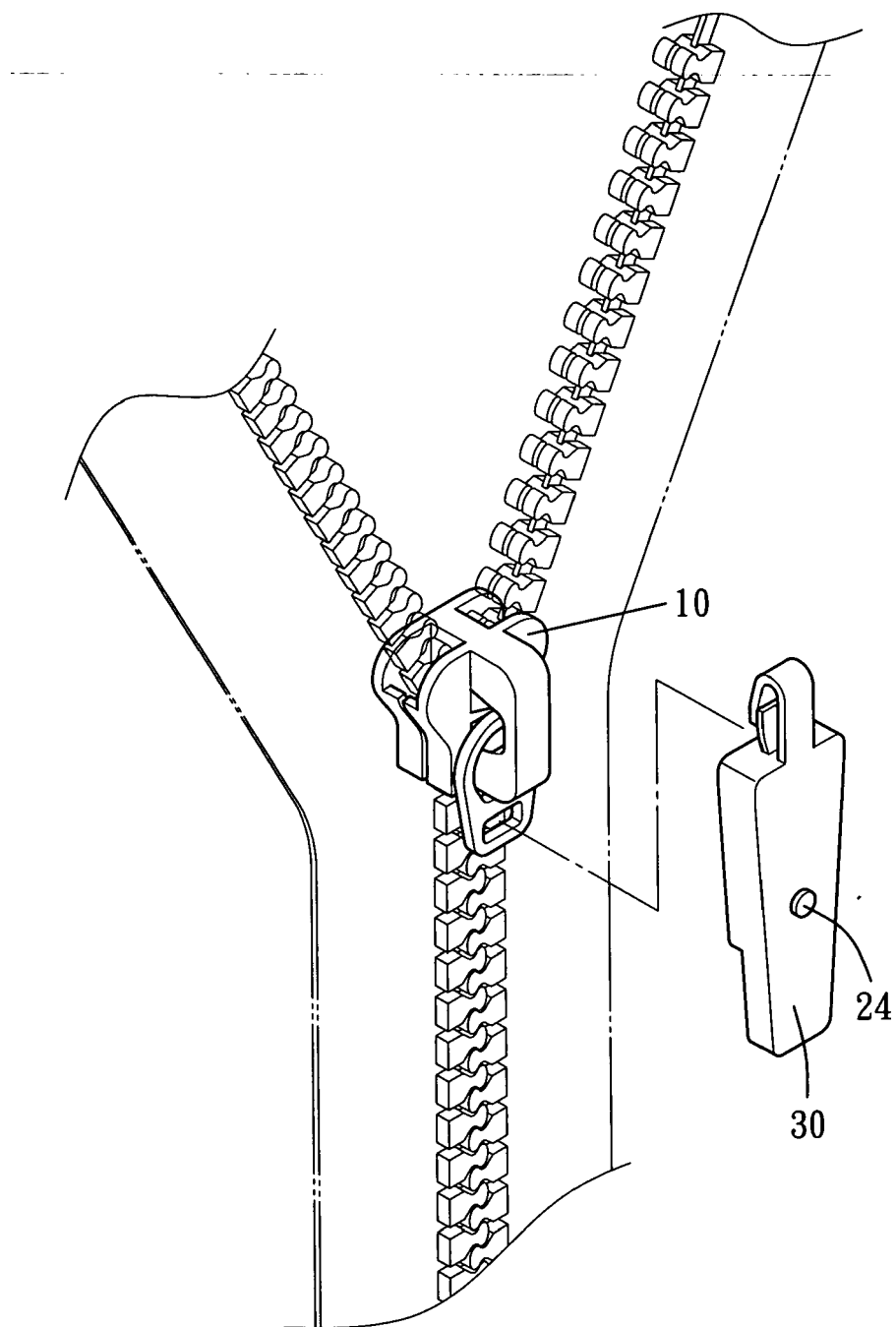


FIG. 12



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	WO 94/04054 A (MAIER, STEVEN, EDWARD) 3 March 1994 (1994-03-03) * page 1, paragraphs 2,4 * * page 2, paragraphs 2,3,5 * * page 6, paragraph 2; figures 1,2 * * page 8, paragraph 3 * -----	1-7	A44B19/26
Y	US 2003/033738 A1 (LII LIH-YUN) 20 February 2003 (2003-02-20) * paragraphs [0005], [0014]; figure 1 * -----	1-7	
A	US 5 622 062 A (GONG-HWA ET AL) 22 April 1997 (1997-04-22) * column 1, lines 7,8,24,36,37 * -----	1-4	
A	US 6 026 546 A (LUND ET AL) 22 February 2000 (2000-02-22) * column 1, lines 6,7,60-65; figures 31-35 * -----	3,4	
A	GB 2 363 499 A (ROBERT REX * GOODMAN; LANCE KENTON * MARSHALL) 19 December 2001 (2001-12-19) * the whole document * -----	1-4,6,7	TECHNICAL FIELDS SEARCHED (IPC) A44B A44C
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 7 November 2005	Examiner Monné, E
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 05 01 2668

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Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 9404054	A	03-03-1994	CA	2121911 A1	03-03-1994
US 2003033738	A1	20-02-2003	NONE		
US 5622062	A	22-04-1997	NONE		
US 6026546	A	22-02-2000	NONE		
GB 2363499	A	19-12-2001	NONE		

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