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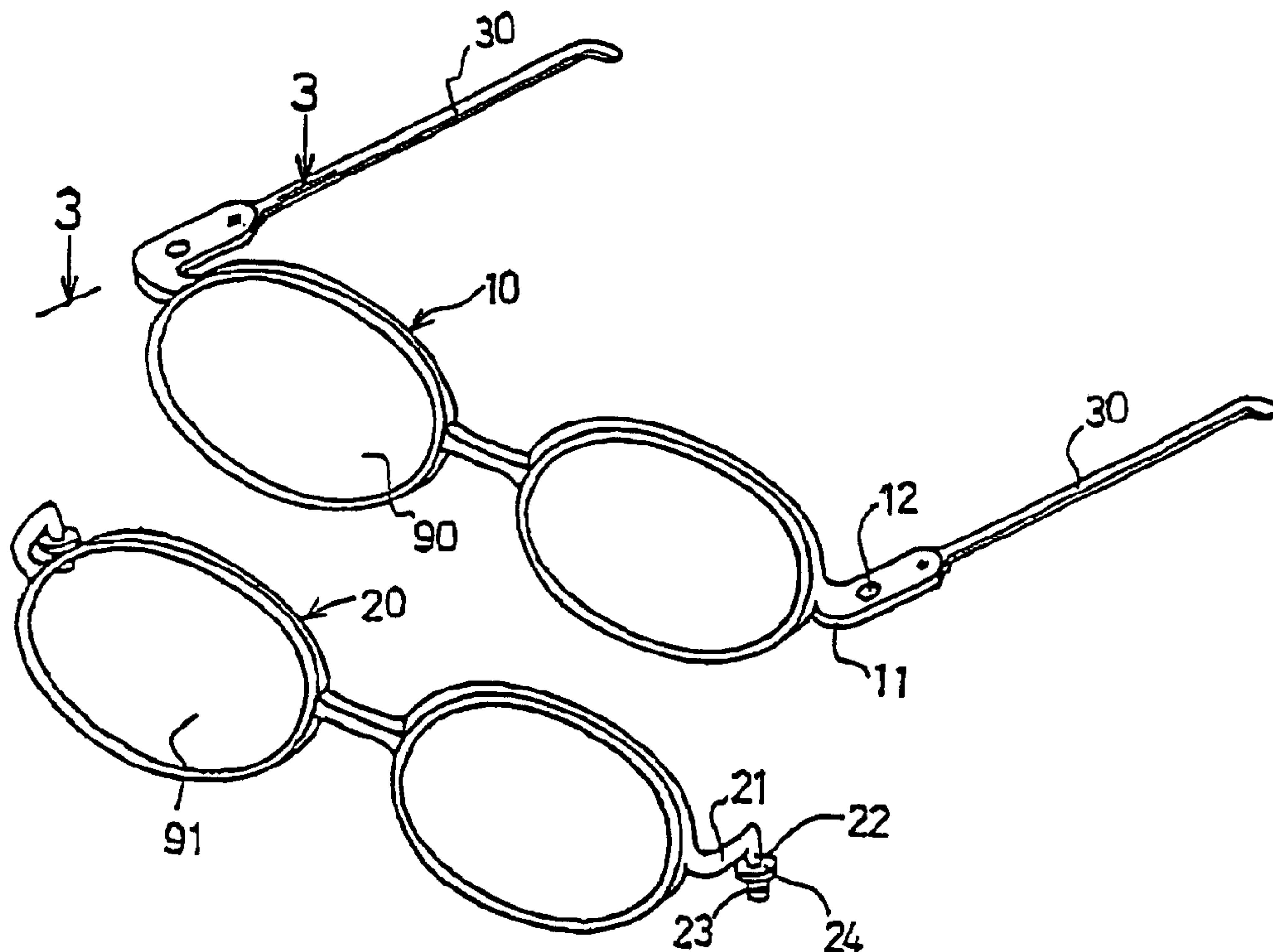
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(54) Titre : MECANISME DE FIXATION DE MONTURE AUXILIAIRE

(54) Title: AUXILIARY FRAME SECURING MECHANISM



(57) Abrégé/Abstract:

An eyeglass device includes a primary frame having two studs formed in the sides. Each of the studs has an opening therein. An auxiliary frame for disposing in front of the primary frame includes two hooks formed in the sides, each for engaging with a corresponding opening of a stud. A securing mechanism includes a spring-biased latch for engaging with each hook and for securing each hook to the stud. A leg is pivotally coupled to each stud. A spring-biased ball may engage with each leg for securing the leg to its stud.



ABSTRACT

An eyeglass device includes a primary frame having two studs formed in the sides. Each of the studs has an opening therein. An auxiliary frame for disposing in front of the primary frame includes two hooks formed in the sides, each for engaging with a corresponding opening of a stud.

- 5 A securing mechanism includes a spring-biased latch for engaging with each hook and for securing each hook to the stud. A leg is pivotally coupled to each stud. A spring-biased ball may engage with each leg for securing the leg to its stud.

AUXILIARY FRAME SECURING MECHANISM

BACKGROUND OF THE INVENTION

1. Field of the Invention

5 The present invention relates to a pair of eyeglasses, and more particularly to a pair of eyeglasses having an auxiliary frame for supporting auxiliary lenses.

2. Description of the Prior Art

10 The closest prior art of which applicant is aware is U.S. Pat. No. 5,568,207 to Chao, which includes an auxiliary frame to be secured to the primary frame which should be engaged with magnets for engaging with the magnets that are engaged in the auxiliary frame.

15 The present invention has arisen to provide a novel configuration for securing the auxiliary frame to the primary frame.

SUMMARY OF THE INVENTION

 The primary objective of the present invention is to provide an eyeglass device in which each of the side studs of the primary frame includes an opening therein for engaging with a hook or a magnet of the auxiliary frame for solidly and stable securing the auxiliary frame to the primary frame.

20 In accordance with one aspect of the invention, there is provided an eyeglass device comprising a primary frame including two sides each having a stud, each of the studs including an opening therein, an auxiliary frame for disposing in front of the primary frame, the auxiliary frame including two sides each having a hook for engaging a corresponding one of the openings, and each of the studs including a groove communicating with the opening, a latch slidably engaged in the
25 groove, and means for biasing the latch inward of the opening to engage with the hook and to secure the hook to the stud. Preferably the biasing means is a spring.

 Each of the studs includes an annular flange formed between the opening and the groove for defining a shoulder and for engaging with the latch. Each of the hooks includes an annular recess for engaging with the latch and for solidly securing the hook to the stud. Each of a pair of legs includes
30 a first end pivotally coupled to a corresponding stud at a pivot shaft. A ball may be engaged in each

groove and engaged with the biasing means, for allowing the biasing means to bias the ball to engage with the first end of the leg and for securing the leg to the stud.

Each of the hooks may include an annular flange for engaging with the stud, and for limiting relative movement of the hook to the stud.

Further objectives and advantages of the present invention will become apparent from a careful reading of a detailed description provided hereinbelow, with appropriate reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded view of an eyeglass device having an auxiliary frame in accordance with the present invention.

FIG. 2 is a top view illustrating the engagement of the auxiliary frame to the eyeglass device.

FIG. 3 is a partial cross sectional view taken along lines 3-3 of FIG. 1.

FIG. 4 is a partial cross sectional view similar to FIG. 3, illustrating the operation of the auxiliary frame securing mechanism; and

FIG. 5 is a partial cross sectional view similar to FIGS. 3 and 4, illustrating another application of the auxiliary frame securing mechanism.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, and initially to FIGS 1-3, an eyeglass device in accordance with the present invention comprises a primary frame 10 for supporting primary lenses 90 and including two studs 11 formed in the side portions. Each of the studs 11 includes an opening 12 therein and each includes a groove 14 formed in the stud 11 and communicating with the opening 12. A pair of stops or an annular flange 15 is formed between the opening 12 and the groove 14 for defining a shoulder 16. A latch 17 is engaged in one end of the groove 14 and is partially extendible inward of the opening 12 (FIGS. 3, 4). The shoulder 16 may engage with the latch 17 and may limit the engagement of the latch 17 into the opening 12. A ball 18 is engaged in the other end of the groove 14. A spring 19 is engaged in the groove 14 and engaged between the ball 18 and the latch 17 for biasing the latch 17 inward of the opening 12.

An auxiliary frame 20 for supporting auxiliary lenses 91 and for disposing in front of the

primary frame includes two extensions 21 disposed at the side portions and extended rearward for engaging over the studs 11 of the primary frame 10 respectively. Each of the extensions 21 includes a hook 22 for hooking and engaging into a corresponding opening 12 of a stud 11. It is preferable that each of the hooks 22 includes an annular recess 23 for engaging with the latch 17 and for solidly
5 securing the hook 22 to the stud 11. It is preferable that each of the hooks 22 includes an annular flange 24 which extends radially outward for engaging with the stud 11 and for limiting the engagement of the hooks 22 into the openings 12 and for preventing dirt from entering into the opening 12.

Each of a pair of legs 30 includes one end pivotally coupled to a corresponding stud 11 at a
10 pivot shaft 31 and each includes one or more arcuate surfaces 32 for engaging with the ball 18. The spring 19 may bias the ball 18 to engage with each of the arcuate surfaces 32 for positioning the legs 30 in a folded (FIG. 3) or an open (FIG. 4) condition.

The extension 21 and the hook 22 may also be made of magnetic material, such as metal, for engaging with the stud 11 which is made of magnetic material.

15 FIG. 5 shows an alternative embodiment wherein the ball 18 and the arcuate surfaces 32 are not required. In this embodiment, the spring 19 extends between the latch 17 and the opposite end face of the groove 14.

Accordingly, the eyeglass device in accordance with the present invention includes a primary frame having an opening formed in each of the studs thereof for engaging with the hook of the
20 auxiliary frame and for solidly and stable securing the auxiliary frame to the primary frame.

Although this invention has been described with a certain degree of particularity, it is to be understood that the present disclosure has been made by way of example only and that numerous changes in the detailed construction and the combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed.

CLAIMS

1. An eyeglass device comprising:

a primary frame including two sides each having a stud, each of said studs including an opening therein;

an auxiliary frame for disposing in front of said primary frame, said auxiliary frame including two sides each having a hook for engaging with a corresponding one of said openings; and

each of said studs including a groove communicating with said opening, a latch slidably engaged in said groove, and means for biasing said latch inward of said opening to engage with said hook and to secure said hook to said stud.

2. The eyeglass device according to claim 1, wherein each of said studs includes an annular flange formed between said opening and said groove for defining a shoulder and for engaging with said latch.

3. The eyeglass device according to claim 1, wherein each of said hooks includes an annular recess for engaging with said latch and for solidly securing said hook to said stud.

4. The eyeglass device according to claim 1, further comprising a pair of legs each including a first end pivotally coupled to a corresponding one of said studs at a pivot point, a ball engaged in each of said grooves and engaged by said biasing means, for allowing said biasing means to bias said ball to engage with said first end of said leg and for securing said leg to said stud.

5. The eyeglass device according to claim 4, wherein each said first end of each leg includes a pair of arcuate surfaces for engagement with said ball, for holding the leg in one of a folded or an open condition.

6. The eyeglass device according to claim 1, wherein each of said studs and said hooks is formed of magnetic material.

7. The eyeglass device according to claim 3, wherein each of said hooks includes an annular

flange located above said recess for engaging with the stud to limit the engagement of the hook into the opening and for prevent dirt from entering into the opening.

8. The eyeglass device according to claim 1, wherein said biasing means is a spring located in said groove with one end thereof engaging said latch.

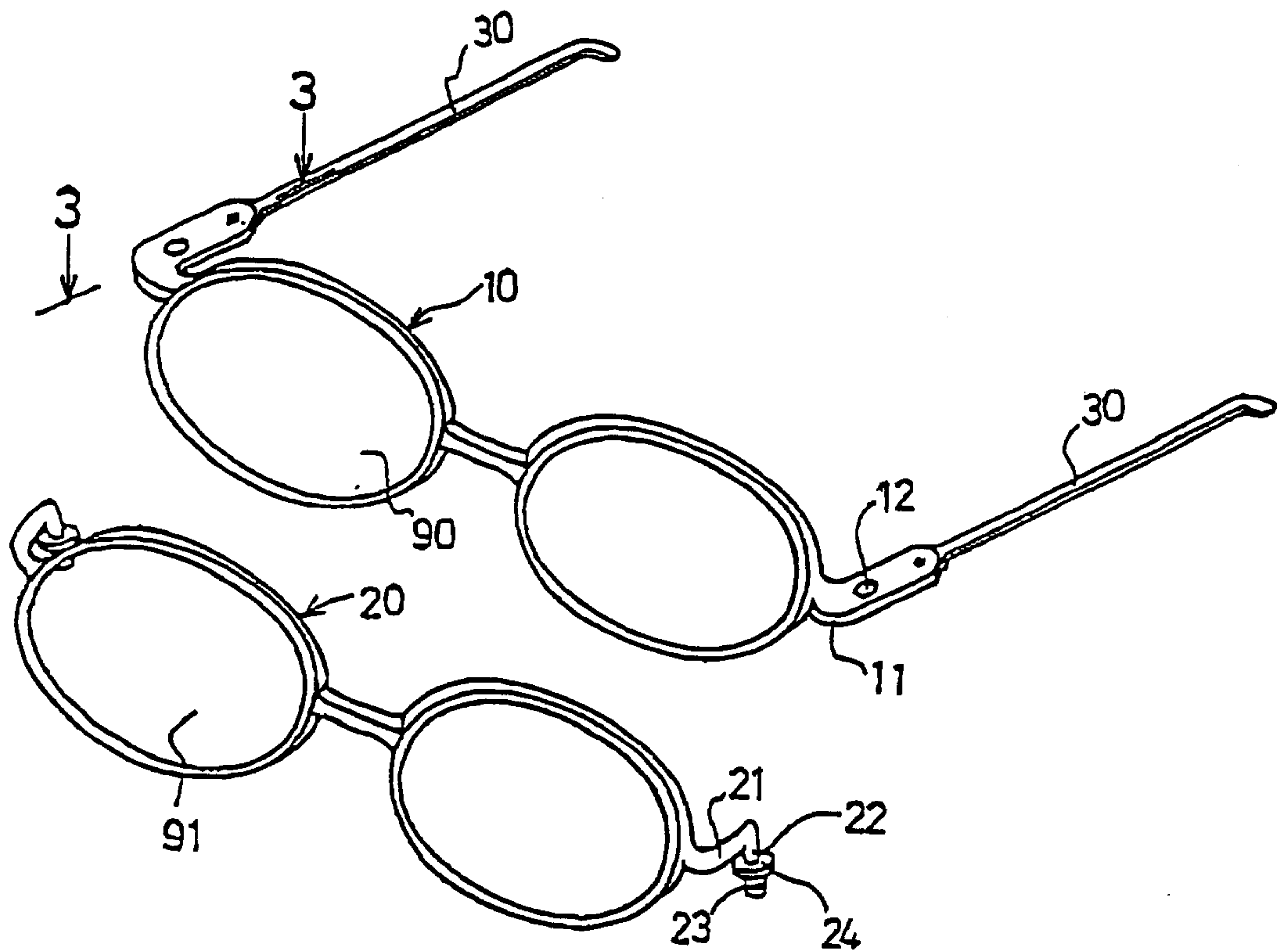


FIG. 1

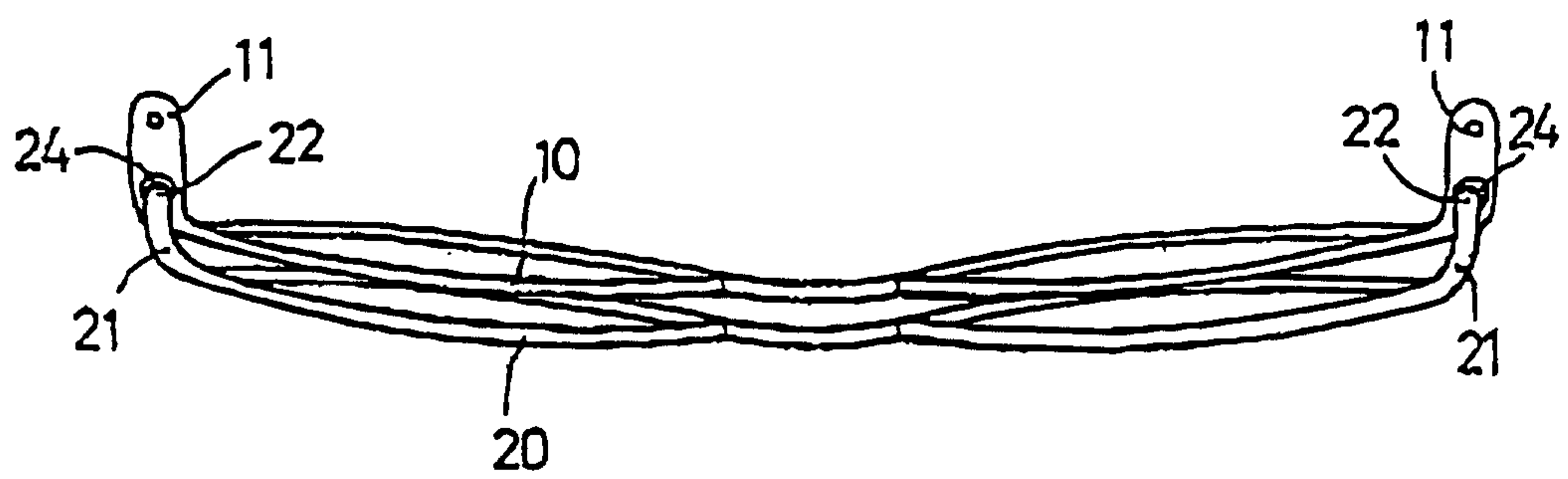


FIG. 2

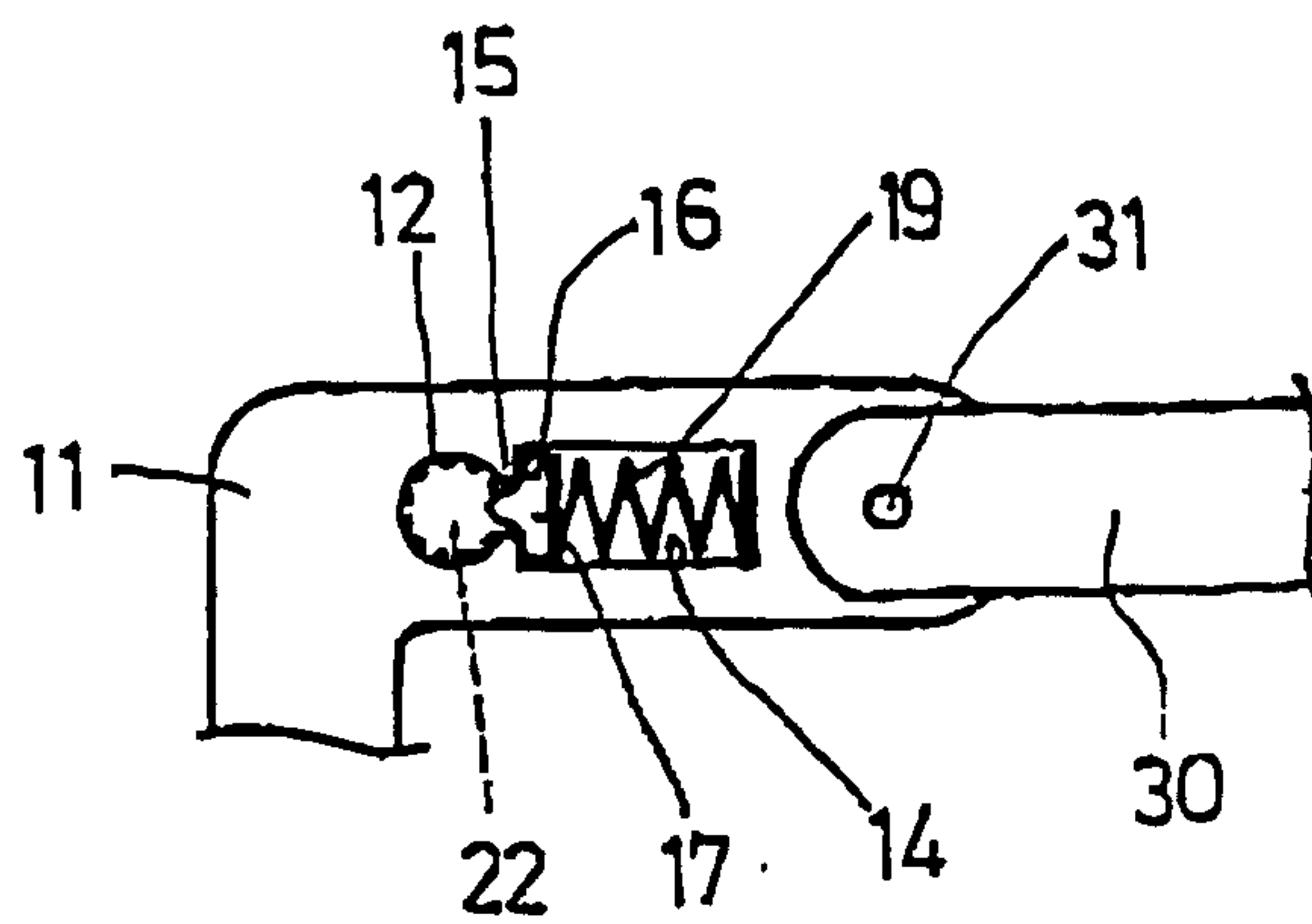


FIG. 5

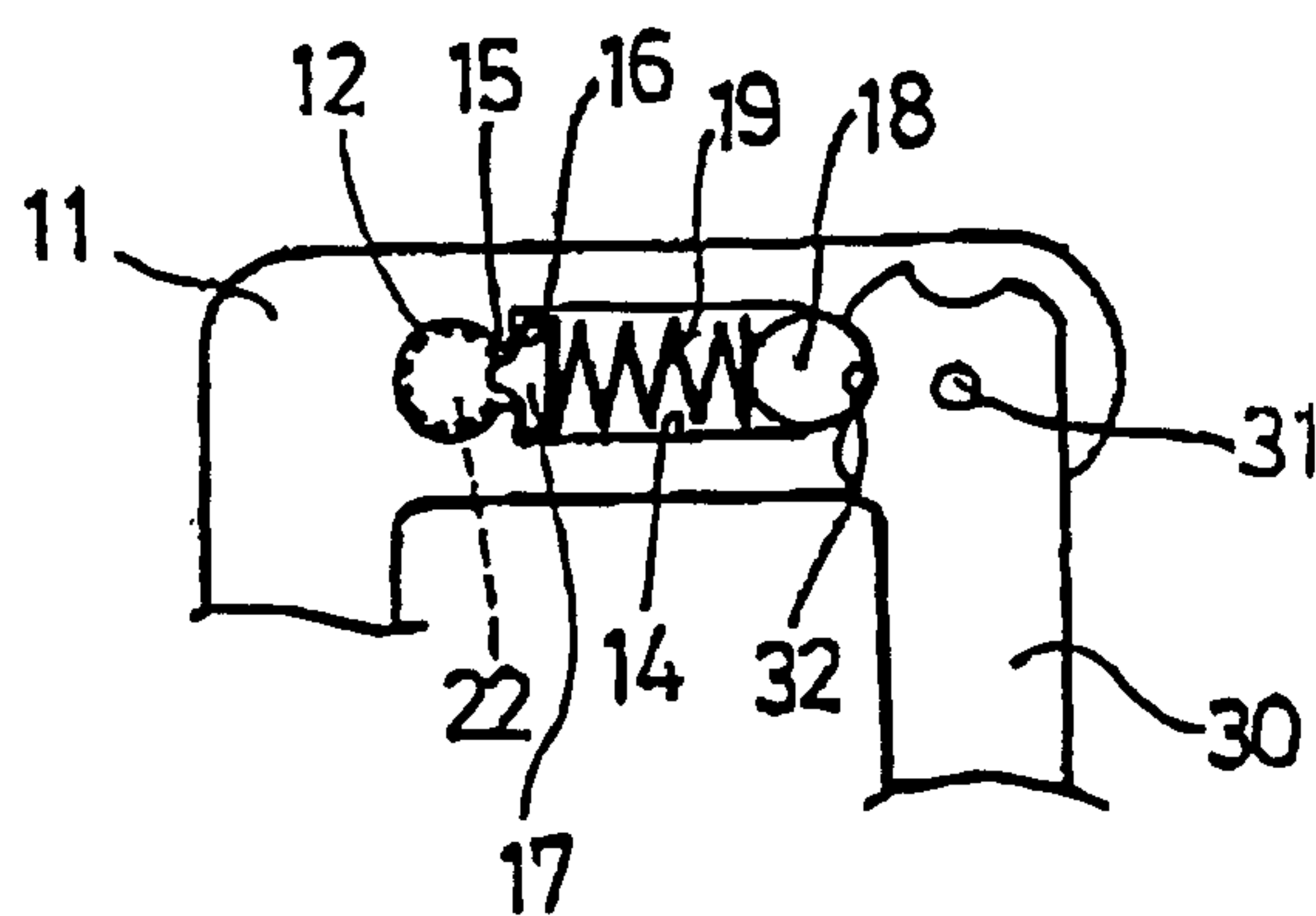


FIG. 4

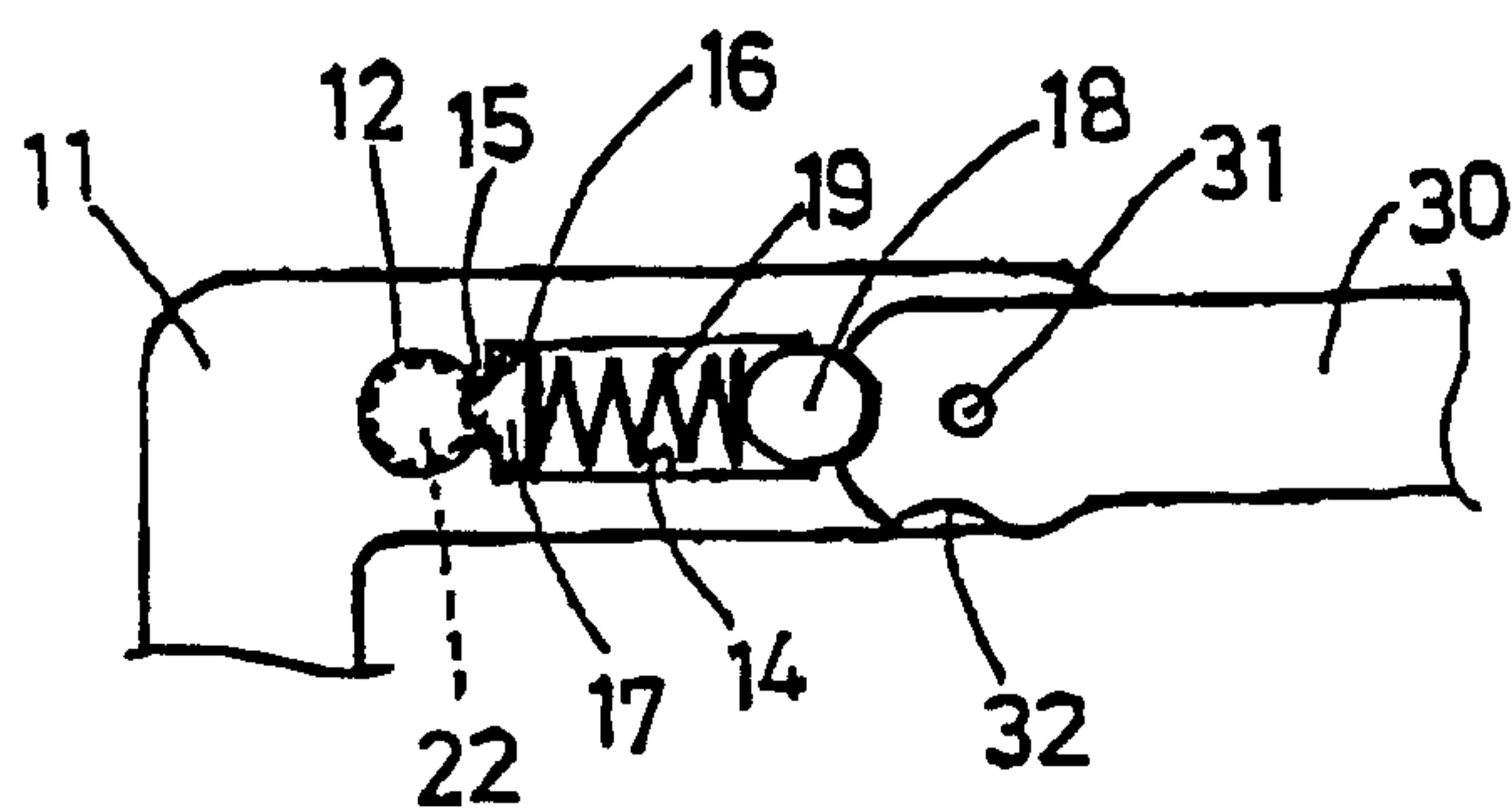


FIG. 3

